

CONTRIBUTION TO THE HIGH ELEVATION FLORA OF THE CHILEAN PATAGONIA: A CHECKLIST OF SPECIES ON MOUNTAINS ON AN EAST-WEST TRANSECT IN THE SIERRA DE LOS BAGUALES, LATITUDE 50° S.

CONTRIBUCION A LA FLORA DE ALTURA DE LA PATAGONIA CHILENA: UNA LISTA DE ESPECIES EN LAS MONTAÑAS DE UNA TRANSECTA ESTE-OESTE EN LA SIERRA DE LOS BAGUALES, LATITUD 50°S.

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ABSTRACT

An annotated checklist of 349 species of vascular plants is given for alpine and subalpine elevations on five mountains at distances varying from 3 to 59 km from the Southern Patagonian Icefield on the Sierra de Los Baguales, Ultima Esperanza province, latitude 50° S, Chilean Patagonia - Cerro Santa Lucía (50° 46'S, 72° 21'W), Cerro Donoso (50° 44'S, 72° 31'W), Cerro Diente (50° 47'S, 72° 57'W), Cerro Agudo (50° 49'S, 73° 03'W) and Cerro Daudet (50° 47'S, 73° 04'W). Data on life-form, habitats and flower colour is provided for each species. 252 species of plants are reported for the Cerro Santa Lucía area, 140 for Cerro Donoso, 167 for Cerro Diente, 85 for Cerro Agudo and 53 for Cerro Daudet.

RESUMEN

Se da una lista de 349 especies de plantas vasculares de la zona alpina y subalpina de cinco cerros que varían de 3 hasta 59 kms. en distancia del Campo de Hielo Patagonia Sur, situados en la Sierra de Los Baguales, provincia de Ultima Esperanza, latitud 50° S, Patagonia chilena - Cerro Santa Lucía (50° 46'S, 72° 21'W), Cerro Donoso (50° 44'S, 72° 31'W), Cerro Diente (50° 47'S, 72° 57'W), Cerro Agudo (50° 49'S, 73° 03'W) y Cerro Daudet (50° 47'S, 73° 04'W). Para cada especie se acompañan datos sobre la forma de vida, habitats y color de la flor. Se indican 252 especies para Cerro Santa Lucía, 140 para Cerro Donoso, 167 para Cerro Diente, 85 para Cerro Agudo y 53 para Cerro Daudet.

KEYWORDS: Checklist, alpine flora, Chilean Patagonia.

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INTRODUCTION

The Southern Patagonian Icefield, the third largest in the world, extends for 350 km from 48° 20'S to 51° 30'S, and occupies an area of 13.500 km. This icefield represents the remains

of a very large continental ice sheet which extended into Argentina (Mercer, 1967), and according to some authors (e.g. Minato & Nishimura, 1982) perhaps covered most of Patagonia from the Pacific to the Atlantic during the Pleistocene.

The high mountain ranges to the east of the Southern Patagonian icefield are of interest, in that, from east to west, they have been open to post-Pleistocene recolonization for increasingly shorter periods of time. Present-day climatic conditions, moreover, are harsher to the west where rainfall is higher, winds are stronger and temperatures are lower. Such mountain ranges constitute an ideal natural setting for assessing the dynamics of post-Pleistocene succession and for testing the effects of habitat harshness on plant community structure and on plant life-history parameters. The kinds of research mentioned, however, presume the existence of intimate knowledge of the alpine and subalpine floras on individual mountains at varying distances from the icefield.

As part of research on the effects of habitat harshness on plant reproductive characteristics carried out in the Chilean Patagonia over the austral summers of 1984-85, 1985-86 and 1986-87, surveys were made of the vascular plant floras on five summits—Cerro Santa Lucía, Cerro Donoso, Cerro Diente, Cerro Agudo and Cerro Daudet—all situated on the Sierra de Los Baguales, Última Esperanza province, latitude 50°S (Fig. 1, Table 1). The Sierra de Los Baguales is the Chilean portion of an east-west oriented range extending from Monte Stokes in the Southern Patagonian Icefield into Argentina. The section of the range in Argentine territory acquire the names Meseta de Las Vizcachas and Meseta de Truco (Fig. 1). The five particular mountain summits considered in this study occur at distances varying from 59 to 3 km from the border of the Southern Patagonian Icefield. The rainfall gradient from west to east in the general area may be illustrated by published climatic records for Río Paine (51° 10'S, 72° 58'W, 46 m.s.m. - 46 km from the icefield) with an annual average precipitation of 798 mm, Cerro Guido (50° 56'S, 72° 27'W, 131 m.s.m. - 50.5 km from the icefield) with 306 mm (Pisano, 1974) and Calafate (50°20'S, 72° 18'W, 220 m.s.m. - 65 km from the icefield) with 204 mm (Pisano & Dimitri, 1973).

Cerro Santa Lucía, the easternmost summit explored, is a treeless mountain, with subalpine *Festuca gracillima* Hook. f. steppe replacing *Nothofagus pumilio* (P. et E.) Krasser forest seen on the mountain further to the west. The main collecting sites were the subalpine and alpine zones (550-1700 m). Additional collections were made in the same vegetation belts at Paso Baguales IV and Paso Vrlika, just to the north of Cerro Santa Lucía, and on the eastern side of the Baguales valley immediately above Estancia La Cumbre.

Cerro Donoso is situated between the Río Baguales and Río de Las Chinas valleys, at the easternmost limit of *Nothofagus pumilio*. Cerro Donoso was approached directly above Estancia Las Chinas and collected from treeline at around 650-700 m to the upper alpine vegetation limit near 1400 m.

Cerro Diente, Agudo and Daudet occur in the north-western sector of Torres del Paine National Park, above the Río Paine valley. Cerro Diente was approached from the southwest side immediately above the Río de Los Caiquenes, a tributary of Río Paine. Plant collections were made from 450 m in subalpine *Nothofagus pumilio* forest in the vicinity of Refugio Brazil and throughout the alpine to 1300 m. Access to Cerro Agudo was via the route from La Victorina to Ventisquero Dickson. The final ascent onto Cerro Agudo was made departing midway along Lago Dickson. Collections were made from 650 m, just below the *Nothofagus pumilio* treeline, to 1200 m. Cerro Daudet was approached directly from Cerro Agudo using a traverse route, above treeline. The plant collections made on this mountain pertain to the south-eastern slopes bordering on Cerro Agudo at an elevation of 700-900 m. It was impossible to reach the upper vegetation limit on Cerro Daudet via the access route chosen.

Of these mountains, botanically, the easternmost Cerro Santa Lucía, with relatively good road access, has received most attention to date. C.W. Furlong (1907-1908) and C. Skottsberg (1908-1909) visited the general area at the beginning of this century. M. Ricardi & O. Matthei explored the Baguales valley in 1962 (Moore, 1985). Collections for this area were made by E. Pisano in 1969, 1972 and 1978. Knowledge of the easternmost Baguales flora was recently increased greatly due to the work of

COLLECTION DATA

Collection dates, collectors and collection numbers are given below for each mountain locality. At this stage, all collections have been deposited in CONC and duplicates of some of the first years collections from Cerro Santa Lucia have been deposited at HIP.

I. CERRO SANTA LUCIA (SL)

a). 1 Dic. 1984 - 12 Feb. 1985
M.T. Kalin Arroyo, O. Dollenz & A. Landero (841000-841090).
M.T. Kalin Arroyo (841091-850245; 850631-850662).

b). 29 Dic. 1985 - 1 Dic. 1986
M.T. Kalin Arroyo & F. Squeo (850954-850955; 850957-850960; 860006-860007; 860012).

c). 17 Nov. 1986 - 30 Jan. 1987
A. Landero (601-812).
M.T. Kalin Arroyo & F. Squeo (870188-870192).

II. CERRO DONOSO (DO)

a). 9 Feb. 1987 - 11 Feb. 1987
M.T. Kalin Arroyo, A. Veloso & A. Peñaloza (870200-870356).

III. CERRO DIENTE (DI)

a). 20 Feb. 1985
M.T. Kalin Arroyo (850246-850250).
b). 14 Dic. 1985 - 20 Jan. 1986
M.T. Kalin Arroyo & F. Squeo (850800-850953; 850965A-850965B; 860001-860005; 860008-860011; 860013-860098).

c). 25 Feb. 1987
M.T. Kalin Arroyo & F. Squeo (870171-870187).

IV. CERRO AGUDO (AG)

a). 15-18 Jan. 1987.
M.T. Kalin Arroyo & F. Squeo (870001-870103; 870116-870117C; 870171C).

V. CERRO DAUDET (DA)

a). 18 Jan. 1987.
M.T. Kalin Arroyo & F. Squeo (870104-870165; 870167-870170A).

Alstroemeriaceae

1. *Alstroemeria patagónica* Phil., Anales Univ. Chile 93: 160. 1986.

Rhizomatous perennial herb; flowers yellow. In sandy soils in *Festuca gracillina* dominated subalpine steppe; occasional. SL: 700 (800 m), 841053 (450 m), 841116 (600 m); DO: 870344 (950 m).

Aspidiaceae

2. *Polystichum andinum* Phil., Linnæa 29: 108. 1858.

Rhizomatous perennial. In cushion bogs, just above treeline; occasional. AG: 870068 (650-750 m); DA: 870133 (800 m).

Athyriaceae

3. *Cystopteris fragilis* (L.) Bernh. var. *apiiformis* (Gand.) C. Chr., Index Filic. Suppl. Prelim. 11. 1917.

Shortly rhizomatous perennial. In rock crevices below treeline or in subalpine steppe. SL: 850111 (850 m); DI: 850928 (600 m).

Berberidaceae

4. *Berberis* sp.

Prostrate shrub; flowers yellow. In *Nothofagus punilio* understory. Rare. DI: 850910 (600 m).

5. *Berberis buxifolia* Lam., Tabl. Encycl. 2: 391, tab. 253, fig. 3. 1792.

Erect shrub; flowers yellow. Common in *Nothofagus pumilio* forest clearings to rare in *Festuca gracillima* steppe. SL: 692 (600 m), 841071 (450 m); 850152 (850 m); DO: 870335; DI: 850946 (500 m); AG: 870103 (700 m).

6. *Berberis empetrifolia* Lam., Tabl. Encycl. 2: 391, tab. 253, fig. 4. 1792.

Sprawling shrub, rooting at nodes; flowers yellow. Mostly in lower alpine just above treeline and in *Festuca gracillima* subalpine steppe. Locally common. SL: 841001 (840 m); DO: 870235 (700 m); DI: 850816 (700 m).

7. *Berberis ilicifolia* L. f., Suppl. Pl. 210. 1781.

Erect shrub; flowers deep orange-yellow. In *Nothofagus pumilio* forest understorey; occasional. DI: 860003 (400 m).

Boraginaceae

8. *Echium vulgare* L., Sp. Pl. 139. 1753.

Weedy species with blue flowers. In disturbed *Festuca gracillima* subalpine steppe. SL: 850091 (600 m).

9. *Myosotis stricta* Link. ex Roem. et Schult., Syst. Veg. 4: 104. 1819.

Erect annual; flowers blue. In *Festuca gracillima* subalpine steppe, and in open habitats in *Nothofagus pumilio* forest. SL: 676 (550 m), 841026 (650 m); DO: 870233 (700 m); DI: 870182 (450 m).

10. *Plagiobothrys* sp.

Erect hispid annual; flowers white. Occasional in disturbed sandy soils in *Festuca gracillima* subalpine steppe. SL: 841050A (700 m).

11. *Plagiobothrys calandrinoides* (Phil.) Johnst., Contr. Gray Herb. 78: 91. 1927.

Prostrate annual; flowers white. Locally common in wet depressions in *Festuca gracillima* subalpine steppe. SL: 841043 (700 m).

Callitrichaceae

12. *Callitriche lechleri* (Hegelm.) Fassett, aff., Rhodora 53: 191. 1951.

Prostrate annual/perennial?; flowers inconspicuous. On edges of ephemeral pools; uncommon. SL: 850113 (850 m).

Calyceraceae

13. *Moschopsis rosulata* (N.E. Br.) Dusèn, Ark. Bot. 7(2): 42. 1907.

Rhizomatous, rosette forming perennial herb; flowers green. Dominant species throughout on high alpine talus slopes. SL: 713 (1400 m), 731 (1600 m), 738 (1300 m); 841086 (1450 m), 850053 (1200 m), 850191 (1300 m); DO: 870251 (1200 m); DI: 850853 (1000 m), 860037 (1100 m). AG: 870046 (1150 m).

14. *Moschopsis trilobata* Dusèn, Ark. Bot. 7(2): 40. 1907.

Rosette forming perennial herb; flowers green. Common species in *Festuca gracillima* subalpine steppe and in lower alpine. SL: 765 (1050 m), 850140 (1100 m); DO: 870251A, 870260 (1000 m).

Cunpanulaccae

15. *Pratia longiflora* Hook. f., Fl. Antarct. 325. 1846.

Prostrate rhizomatous perennial herb, rooting at nodes; flowers white with bluish centers. Occasional in subalpine and alpine bogs. SL: 774 (600 m), 841074B (800 m), 850636 (900 m); DO: 870227 (700 m).

Caryophyllaccae

16. *Arenaria serpens* H.B.K., Nov. Gen. Sp. 6: 32. 1823.

Prostrate perennial herb; flowers white. At edges of ephemeral pools only. Locally common. SL: 850028 (800 m), 850196 (1000 m).

17. *Cerastium arvense* L., Sp. Pl. 438. 1753.

Perennial herb with loosely matted stems; flowers white. Common species throughout in the subalpine and alpine reaching upper limit of vegetation. SL: 620 (1000 m), 850661 (1000 m); DO: 870230 (1300 m); DI: 850862 (900-1000 m); AG: 870065 (750 m); DA: 870105 (700 m).

18. *Cerastium glomerulatum* Thuill., Fl. Env. Paris, ed. 2, 226. 1799.

Annual; flowers transparent white. Locally common along steam edges in subalpine bogs. SL: 841143 (600 m).

19. *Colobanthus lycopodioides* Griseb., Syst. Bemerk. 28. 1854.

Deep rooted perennial forming small, compact cushions; flowers green. Locally common in snow depressions mostly in high alpine. SL: 841016 (630-900 m), 850058 (1100 m), 850195 (1300 m); DO: 870326 (1000-1100 m).

20. *Colobanthus quitensis* (H.B.K.) Bartl. in K. Presl, Reliq. Haenk. 2: 13, tab. 49. 1831.

Caespitose perennial herb, sometimes forming small mats; flowers green. In poorly drained soils on slopes or in alpine bogs; locally common. SL: 841059 (600 m), 841137 (600 m), 850065 (600 m); DO: 870273 (750 m); DI: 860004 (400 m), 860053 (500 m).

21. *Colobanthus subulatus* (D'Urv.) Hook. f., Fl. Antarct. 13. 1844.

Perennial herb forming small, compact cushions; flowers green. Very abundant in subalpine and alpine in the east, diminishing in abundance westward. SL: 653 (1000 m), 841038 (800 m), 850059 (1100 m), 850115 (1200 m); DO: 870213 (1100 m); DI: 850870 (1000 m); AG: 870026 (700 m); DA: 870146 (850 m), 870149 (800 m).

22. *Philippiella patagonica* Speg., Revista Fac. Agron. Veterin. La Plata 3(30-31): 566. 1897.

Perennial forming low, tight cushions. Extremely rare in *Festuca gracillima* subalpine steppe. SL: 841021 (800 m).

23. *Sagina procumbens* L., Sp. Pl. 128. 1753.

Perennial with inconspicuous flowers. Occasional in moist, disturbed sites below treeline. DI: 850922 (400 m), 860008 (450 m).

24. *Silene antarctica* (O.K.) Ped. in Correa, Fl. Patag. 4a: 234. 1984.

Perennial herb with thick rootstock. Common in alpine and high alpine zones. DO: 870229 (900-1000 m).

25. *Silene chilensis* (Naud.) Bocq., Candollea 22: 36. 1967.

Low perennial herb with thick rootstock. In subalpine and alpine zones, especially common in latter. SL: 729 (1000 m), 841139B (900 m), 850027 (750 m).

26. *Stellaria debilis* D'Urv., Fl. Iles Malouin. 52. 1825.

Slender creeping perennial herb; flowers white. Common in subalpine bogs and along streamsides. SL: 841047 (600 m); DO: 870274 (700 m).

Celastraceae

27. *Maytenus disticha* (Hook. f.) Urban in Urban et Graebn., Festschr. Ascherson 58. 1904.

Low growing shrub; flowers pinkish. In undisturbed *Nothofagus pumilio* forest understory. Common. DI: 850927 (600 m), 860083 (600 m).

28. *Maytenus magellanica* (Lam.) Hook. f., Fl. Antarct. 254. 1845.

Erect shrub; flowers reddish. Rare along stream edges and in undisturbed *Nothofagus pumilio* understory. DI: 850936 (500 m).

Chenopodiaceae

29. *Chenopodium antarcticum* (Hook. f.) Hook. f., Gen. Pl. 3: 52. 1880.

Prostrate perennial herb; flowers inconspicuous. Common on sandy and disturbed soils in *Festuca gracillima* subalpine steppe. SL: 850104A (600 m).

30. *Chenopodium carnosulum* Moq. in DC. Prodr. 13(2): 64. 1849.

Prostrate annual; flowers inconspicuous. Common on disturbed soils in *Festuca gracillima* subalpine steppe. SL: 850104B (600 m).

Compositae

31. *Abrotanella emarginata* (Cass. ex Gaud.) Cass., Dict. Sci. Nat. 36: 27. 1825.

Perennial herb forming large, hard, compact cushions; florets brownish-red. Dominant in alpine bogs to west; absent in extreme east. DO: 870302 (1000 m); DI: 850873 (950 m), 870185 (900 m); AG: 870100 (750 m); DA: 870129 (800 m), 870130 (800 m).

32. *Abrotanella linearifolia* A. Gray, Proc. Amer. Acad. Arts 5: 137. 1862.

Perennial herb with slender rhizomes; florets inconspicuously coloured. Locally common in alpine and subalpine bogs on western summits. AG: 870170 (700 m); DA: 870130 (800 m).

33. *Abrotanella trichoachaena* Cabr., Revista Chilena Hist. Nat. 38: 85. 1934.

Rhizomatous perennial forming loose cushions; florets inconspicuously coloured. Common in alpine bogs above and below treeline. AG: 870064 (650 m).

34. *Adenocaulon chilense* Poepp. ex Less., Linnaea 6: 107. 1831.

Rosette perennial herb; florets pinkish-white. Rare species in open moist sites and flush areas in *Nothofagus pumilio* forest. DI: 850905 (600 m), 860094 (450 m).

35. *Antennaria chilensis* Remy var. *magellanica* (Sch. Bip.) Reiche, Anales Univ. Chile 112: 97. 1903.

Rhizomatous perennial herb; florets inconspicuously coloured. Scattered in subalpine and middle alpine. SL: 760 (1000 m), 841058 (600 m), 850143 (1000 m); DO: 870210 (700 m); DI: 840804 (650 m), 850947 (600 m).

36. *Aster vahlii* (Gaud.) H. et A., Comp. Bot. Mag. 2: 49. 1836.

Perennial herb; ray florets white. Locally common along subalpine streamsides and in alpine bog. SL: 770 (900 m), 850120 (850 m); DO: 870250 (700 m); DI: 850948B (600 m).

37. *Baccharis magellanica* (Lam.) Pers., Syn. Pl. 2: 425. 1807.

Prostrate shrubs forming extensive bright green mats; florets inconspicuously coloured. Rare in *Festuca gracillina* subalpine steppe in

east to becoming common in clearings in *Nothofagus pumilio* forest to the west. SL: 618 (1000 m), 850122 (800 m); DI: 850903 (500 m), 850916 (500 m), 860015 (500 m).

38. *Chamomilla suaveolens* (Pursh) Rydb., North Amer. Fl. 34: 232. 1916.

Aromatic annual herb; florets greenish-yellow. Locally common around human settlements. SL: 682 (550 m).

39. *Chiliotrichum diffusum* (G. Forster) O.K., Revisio Gen. Pl. 3(2): 141. 1898.

Erect to low growing shrub; florets white. In subalpine and occasionally alpine bogs and in *Nothofagus pumilio* forest clearings. SL: 754 (750 m), 850121 (800 m); DO: 870269 (700 m); DI: 850890 (550 m); AG: 870083 (650 m).

40. *Erigeron leptopetalus* Phil., Linnaea 33: 136. 1864.

Rhizomatous perennial herb., florets white. Common from subalpine to high alpine locations. SL: 660 (650 m), 708 (800 m), 740 (1100 m), 757 (700 m), 766 (1050 m), 778 (1100 m), 850660 (600 m); DO: 870214 (1100 m); DI: 850865 (1000 m), 850940 (950 m); AG: 870043 (900-1000 m); DA: 870160 (800 m).

41. *Erigeron myosotis* Pers., Syn. Pl. 2: 431. 1807.

Rhizomatous perennial herb; florets white to tinged blue. Locally common in *Nothofagus pumilio* forest clearings. DI: 850948A (600 m), 860017 (500 m), 860046 (650 m).

42. *Gamochaeta neuquensis* Cabr., Bol. Soc. Argent. Bot. 9: 372. 1961.

Perennial herb; florets whitish. Rare in open sites in *Nothofagus pumilio* clearings. DI: 850949 (600 m).

43. *Gamochaeta nivalis* Cabr., Bol. Soc. Argent. Bot. 9: 374. 1961.

Perennial herb; florets whitish; common in alpine locations. SL: 850023 (900 m); DO: 870299 (900 m); DI: 850950 (800 m).

44. *Gamochaeta spiciformis* (Sch. Bip.) Cabr., Bol. Soc. Argent. Bot. 9: 381. 1961.

Perennial herb; florets whitish. Locally common in alpine bogs. SL: 850048 (900 m); AG: 870085 (750 m); DA: 870123 (850 m).

45. *Hieracium antarcticum* D'Urv., Fl. Iles Malouin. 39. 1825.

Rosette perennial; heads yellow. Common in shaded sites in open *Nothofagus pumilio* forest. DO: 870354 (ca 550 m); DI: 850911 (550 m); AG: 870097 (650 m).

46. *Hypochaeris* sp.

Rosette perennial herb; heads yellow. Scattered in alpine. SL: 841074A (900 m).

47. *Hypochaeris arenaria* Gaud., Ann. Sci. Nat. (Paris) 5: 103. 1825.

Rhizomatous perennial with underground rhizomes; heads yellow. In disturbed sites in *Nothofagus pumilio* forest. DI: 850912 (550 m), 860054 (500 m).

48. *Hypochaeris incana* (H. et A.) Maclosk., Rep. Princeton Univ. Exped. Patag. 8. Bot. 899. 1906.

Perennial with stout rhizomes; heads white. Subalpine to high alpine locations. Common. SL: 663 (650 m), 690 (850 m), 850147 (1100 m); DO: 870246 (650-700 m), 870247A (700 m); DI: 850867 (750 m), 850898 (650 m).

49. *Hypochaeris radicata* L., Sp. Pl. 811. 1753.

Deeply rooted perennial; heads yellow. In disturbed sites. DI: 860055B (500 m), 860072 (450 m).

50. *Hypochaeris tenerifolia* (Remy) Hoffm., Wiss. Ergebn. Schwed. Exped. Magellansl. 3(5): 121. 1900.

Slender perennial herb; heads yellow. In clearings mostly below treeline. AG: 870099 (650 m).

51. *Lagenifera nudicaulis* (Comm. ex Lam.) Dudley, Rhodora 83: 482. 1981.

Delicate perennial with slender rhizomes; heads white. On shaded stream banks in *Nothofagus pumilio* forest. DI: 860075 (700 m).

52. *Leucheria hahnii* var. *hahnii* Franchet, Miss. Sci. Cap Horn 5. Bot. 349. 1889.

Rhizomatous perennial herb; heads white to pinkish, occasionally deep pink. Common species in moist sites in subalpine and alpine. SL: 688 (850 m), 769 (900 m), 841111 (900 m), 841148 (1000 m); DO: 870334 (750 m).

53. *Leucheria hahnii* Franchet var. *lanata* (Alboff) Cabr. in Correa, Fl. Patag. 7: 362. 1971.

Rhizomatous perennial herb; heads white to pinkish. Common in subalpine and alpine locations. SL: 850034 (900 m); DI: 850897 (650 m); AG: 870054 (650 m).

54. *Leucheria leontopodioides* (O.K.) Schum., Just's Bot. Jahresb., 26(1): 378. 1900.

Rhizomatous perennial forming small, compact cushions. Dominant species throughout in high alpine talus slopes. SL: 640 (1300 m), 710 (1300 m), 734 (1500 m), 850047 (1100 m), 850082 (1100 m), 850089 (1100 m); DO: 870207 (900-1000 m); DI: 850823 (900-1000 m), 860010 (1000 m), 860035 (1100 m); AG: 870010 (900-1200 m); DA: 870121 (850 m).

55. *Leucheria purpurea* (Vahl) H. et A., Comp. Bot. Mag. 2: 43. 1836.

Rhizomatous perennial herb; heads wine-red. Locally abundant species in subalpine and alpine locations. SL: 687 (800 m), 704 (800 m), 762 (1050 m), 841110 (900 m), 841127 (850 m), 841147 (900 m), 850097 (900 m), 860012 (900 m).

56. *Macrachaenium gracile* Hook. f., Fl. Antarct. 321. 1846.

Perennial herb with oblique rhizome; heads white. Rare species in shaded sites or along streamsides at or close to treeline DI: 850915 (600 m), 860082 (700 m).

57. *Nardophyllum bryoides* (Lam.) Cabr., Notas Mus. La Plata, Bot. 17: 61. 1954.

Prostrate shrub forming dense cushions; heads deep yellow. Dominant species in subalpine, extending into alpine locations. SL: 686 (800 m), 850092 (750 m); DO: 870322 (900 m).

58. *Nassauvia aculeata* (Less.) P. et E. var. *azorelloides* (Speg.) Cabr., Darwiniana 24: 356. 1982.

Multistemmed weak shrub; florets white. Common in alpine and subalpine. SL: 850072 (700 m); DO: 870239 (900 m), 870329 (1200 m); DI: 860032 (800 m).

59. *Nassauvia coronipappa* Arroyo et Martic, Brittonia 40:332. 1988.

Perennial herb, with deep, horizontal

rhizomes; florets white? Widespread, but never dominant in alpine, especially on talus slopes. DO: 870314 (800-1100 m). Apparently endemic to Cerro Donoso (see Arroyo & Marticorena, 1988).

60. *Nassauvia darwinii* (H. et A.) O. Hoffm. et Dusén, Wiss. Ergebn. Schwed. Exped. Magellansl. 3(5): 112. 1900.

Rhizomatous perennial herb; florets white. Common in subalpine and alpine on eastern mountains. SL: 712 (650 m), 759 (1000 m), 850130 (1000 m), 850171 (1000 m); DO: 870290 (800 m).

61. *Nassauvia duseii* O. Hoffm. in Macloskie, Rep. Princeton Univ. Exped. Patag. 8, Bot. 879. 1906.

Perennial herb with prostrate stems; florets white. In alpine talus slopes. DO: 870356 (900 m).

62. *Nassauvia lagascae* (D. Don) var. *lanata* (Phil.) Skottsbl., Kongl. Svenska Vetenskapsakad. Handl. n.s. 56(5): 329. 1916.

Rhizomatous rosette perennial; florets white. common species throughout in alpine. SL: 623 (1300 m), 697 (900 m), 717 (1300 m), 841028 (1100 m), 841090 (1400 m), 850054 (1100 m); 850086 (1100 m), 850100 (1100 m), 850173 (1300 m), 850955 (1100 m); DO: 870261 (1000 m); DI: 850036 (1100 m), 850835B (900 m), 870171 (900 m); AG: 870009 (900 m).

63. *Nassauvia maeviae* Cabr., Darwiniana 24: 367. 1982.

Low perennial forming tight cushions; florets white. Rare in *Festuca gracillima* subalpine steppe. SL: 841140 (700 m).

64. *Nassauvia magellanica* J.F. Gmel., Syst. Nat. 2: 1281. 1792.

Rhizomatous perennial herb; florets white; Common in moist alpine locations, occasionally extending lower in stream beds. SL: 724 (1100 m), 742 (1300 m), 850041 (1100 m), 850108 (850 m); DO: 870257 (1100 m); DI: 850944 (850 m), 860034 (850 m); AG: 870036 (850 m); DA: 870139 (900 m).

65. *Nassauvia pygmaea* (Cass.) Hook. f., Fl. Antarct. 319. 1846.

Rhizomatous, multistemmed perennial herb; heads creamish-white. Dominant species throughout in high alpine, extending also into low alpine. SL: 622 (1300 m), 718 (1300 m), 841151 (1100 m), 850044 (1100 m); DO: 870278 (1200 m); DI: 850806 (1000 m), 850875 (1000); AG: 870008 (800-1000 m); DA: 870138 (900 m).

66. *Nassauvia revoluta* D. Don, Philos. Mag. Ann. Chem. 11: 390. 1832.

Rhizomatous perennial herb; florets white to brownish-white. Common species throughout in high alpine. SL: 725 (1200 m), 850954 (1100 m); DO: 870206 (900-1000 m); DI: 850822 (850-950 m), 850835A (900 m), 850878 (950 m), 860011 (1000 m); AG: 870040 (1100 m); DA: 870137 (850 m).

67. *Perezia lactucoides* (Vahl) Less., Linnaea 5: 22. 1830.

Fleshy perennial herb with slender rhizomes; florets white. In high alpine cushion bogs, and in flush areas below treeline. DI: 850914 (650 m); AG: 870012 (750 m).

68. *Perezia linearis* Less., Syn. Gen. Compos. 412. 1832.

Subshrub, forming extensive mats; florets deep blue. On exposed rocky outcrops, below treeline. Rare. DI: 860092 (480 m).

69. *Perezia magellanica* (L. f.) Less., Linnaea 5: 23. 1830.

Perennial herb with thick oblique rhizomes; florets white. In bog and flush areas below *Nothofagus pumilio* treeline to occasionally in above treeline bogs. DI: 860027 (650 m); AG: 870117 (750 m).

70. *Perezia megalantha* Speg., Revista Fac. Agron. Veterin. La Plata 3(30-31): 540. 1897.

Perennial herb producing rosettes from stout rhizomes; florets white to pinkish-brown. Locally common species throughout in high alpine. SL: 726 (1200 m), 739 (1100 m), 850042 (1100 m), 850082 (1100 m); DO: 870297 (1000 m); DI: 850818 (1050 m), 860038 (1100 m).

71. *Perezia pilifera* (D. Don) H. et A., Comp. Bot. Mag. 1: 34. 1835.

Rhizomatous perennial herb often forming extensive interconnected mats; florets pale blue.

Common species in alpine bogs extending onto dry slopes. SL: (750 m), 841146 (900 m), 850063 (900 m); DO: 870205 (1100 m); DI: 850866 (750 m), 850943 (900 m); AG: 870016 (700 m); DA: 870131 (800 m).

72. *Perezia recurvata* (Vahl) Less., *Linnaea* 5: 21. 1830.

Low, compact, weak shrub forming compact cushions; florets blue. Common in subalpine to the east, extending into lower alpine: SL: 744 (560 m), 756 (700 m), 841138A (600 m); DO: 870268 (850 m).

73. *Senecio acanthifolius* Hombr. et Jacq., *Voy. Pôle Sud, Atlas, tab. 11*. 1845.

Succulent perennial herb with short, stout rhizome; heads florets greenish-white. Locally abundant in bog and flush areas below treeline, extending into *Nothofagus pumilio* forest when damp. DI: 850929 (600 m), 860091 (700 m); AG: 870052 (650 m).

74. *Senecio alloephyllus* O. Hoffm., *Wiss. Ergebn. Schwed. Exped. Magellansl.* 3(5): 105. 1900.

Much branched subshrub; heads yellow. In rock crevices in alpine to high alpine, extending close to upper vegetation limit. SL: 723 (1100 m), 850043 (1100 m), 850088 (1100 m), 850112 (1100 m); DO: 870236 (800 m), 870324 (950 m).

75. *Senecio argyreus* Phil., *Anales Univ. Chile* 88: 261. 1894.

Low subshrub; florets yellow. Locally common on sandy soils in subalpine locations, extending into alpine. SL: 785 (900 m), 850105 (850 m), 850246 (700 m); DI: 850825A (450 m), 850883 (500 m), 850925A (600 m).

76. *Senecio beaufilkii* O.K., *Revisio Gen. Pl.* 3(2): 171. 1898.

Scrambling subshrub; heads yellow. In wet depressions in *Festuca gracillima* subalpine steppe. SL: 850021 (900 m), 850062 (900 m).

77. *Senecio culcitenellus* Cuatr., *Fieldiana, Bot.* 27(1): 43. 1950.

Low growing perennial herb with oblique rhizomes; heads greenish-yellow. A rare species in high alpine. SL: 841086A (1100 m).

78. *Senecio kingii* Hook. f., *Fl. Antarct.* 314. 1846.

Rhizomatous perennial herb; heads golden yellow. Common in high alpine. SL: 761 (1050 m), 850084 (1100 m), 850958 (1100 m).

79. *Senecio laseguei* Hombr. et Jacq., *Voy. Pôle Sud, Atlas, tab. 13D*. 1845.

Rhizomatous perennial herb with decumbent stems; heads yellow. Locally common in high alpine: SL: 696 (900 m), 841034 (1100 m), 850087 (1100 m), 850959 (1100 m); DO: 870277 (1000 m); AG: 870030 (750-1000 m).

80. *Senecio magellanicus* H. et A., *J. Bot. (Hooker)* 3: 343. 1841.

Rhizomatous perennial with oblique rhizome; heads dirty yellow. Common throughout in low alpine, extending into high alpine. SL: 722 (1100 m), 850045 (1000 m), 850094 (900 m), 860006 (1000 m); DO: 870282 (1100 m), 870295 (1000 m); DI: 850830 (850-950 m); AG: 870030 (750-1000 m).

81. *Senecio martiniensis* Dusèn, *Ark. Bot.* 7(2): 43. 1907.

Rhizomatous perennial herb; heads golden yellow. In alpine bog and sandy, moist sites on river beds. SL: 786 (900 m), 850026 (800 m).

82. *Senecio miser* Hook. f., *Fl. Antarct.* 314. 1846.

Erect subshrub; heads yellow. Common in subalpine to the east. SL: 685 (800 m), 850022 (850 m), 850067 (800 m).

83. *Senecio patagonicus* H. et A., *J. Bot. (Hooker)* 3: 344. 1841.

Much branched subshrub; heads pale yellow. Common at lower elevations in *Festuca gracillima* subalpine steppe. SL: 811 (550 m), 850153 (600 m), 850957A (700 m); DO: 870309 (650 m).

84. *Senecio sericeonitens* Speg., *Revista Fac. Agron. Veterin. La Plata* 3(30-31): 537. 1897.

Small subshrub; heads bright yellow. Locally common in *Festuca gracillima* subalpine steppe to east. SL: 743 (560 m), 850071 (700 m).

85. *Senecio subpubescens* Cabr., *Lilloa* 15: 194. 1949.

Succulent perennial herb, branched at base; heads yellow. Occasional at tree-line. DI: 860040 (700 m).

86. *Senecio tricuspidatus* H. et A., J. Bot. (Hooker) 3: 346. 1841.

Small shrub; heads yellow. Locally common species below treeline at forest edge. DO: 870301 (650 m); DI: 860001 (400 m), 860014 (500 m), 860098 (450 m).

87. *Taraxacum gilliesii* H. et A., Comp. Bot. Mag. 1: 31. 1835.

Rhizomatous perennial; florets yellow. Scattered in subalpine and alpine locations, usually in moist habitats. SL: 689 (850 m), 752 (750 m), 777 (1300 m); DO: 870241 (1050 m).

88. *Taraxacum officinale* Weber in Wiggers, Primit. Fl. Holsat. 56. 1780.

Perennial herb; heads yellow. Widespread in low elevation bogs and flush areas. SL: 751 (750 m).

Cruciferae

89. *Capsella bursa-pastoris* (L.) Medik., Pfl.-Gatt. 85. 1792.

Annual; flowers white. On disturbed sandy soils. SL: 683 (550 m).

90. *Cardamine glacialis* (G. Forster) DC., Syst. Nat. 2: 264. 1821.

Rhizomatous perennial herb; flowers white. In subalpine and alpine bogs and along streamsides. SL: 613 (800 m), 841020 (800 m), 841121 (800 m); DO: 870308 (650 m); DI: 850913 (850 m); AG: 870053 (650 m); DA: 870157 (800 m).

91. *Descurainia sophia* (L.) Webb. ex Prantl. Natürl. Pflanzenfam. 3(2): 192. 1891.

Slender annual; flowers greenish-yellow. In heavily disturbed areas around human settlements. SL: 681 (550 m), 841125 (600 m).

92. *Draba funiculosa* Hook. f., Fl. Antarct. 238. 1845.

Caespitose perennial herb., flowers white to tinged lilac. Rare species in subalpine and alpine bogs, occasionally on drier slopes. SL: 691 (900

m), 782 (1100 m), 841046 (850 m); AG: 870117A (700 m).

93. *Draba magellanica* Lam., Encycl. 2: 328. 1786.

Caespitose perennial herb; flowers white. Widespread, but local in alpine habitats, usually in moister areas. SL: 634 (1100 m), 841031 (900 m), 850052 (1000 m), 850102 (950 m); DO: 870270 (800 m); DI: 850845A (900 m), 850956A, 860081 (700 m); AG: 870095 (800 m); DA: 870120 (850 m).

94. *Draba subglabrata* (Speg.) O.E. Schulz, Pflanzenz. 4(105) Heft 89: 325. 1927.

Caespitose perennial herb; flowers pale yellow. Locally common towards the drier edges of subalpine and alpine bogs. SL: 605 (900 m), 633 (1100 m), 841025 (850 m); DO: 870306 (700 m).

95. *Eudema hauthalii* Gilg et Muschl., Bot. Jahrb. Syst. 42: 471. 1909.

Perennial herb extensive loose cushions; flowers white to cream. In high alpine in wet depressions or in cushion bogs, occurring almost to the upper limit of the vegetation. SL: 651 (1100 m), 841070 (600 m), 841088 (900 m); DO: 870226; DI: 850848 (1000 m), 850953 (900 m); AG: 870015 (1000 m); DA: 870141 (850 m).

96. *Grammosperma dusenii* O.E. Schulz, Notizbl. Bo. Gart. Berlin-Dahlem 10: 562. 1929.

Perennial herb; flowers white, with a purple hue. Rare, mostly in areas of sand accumulation. DI: 850847 (850-1000 m), 860041 (830 m).

97. *Menonvillea nordenskjöldii* (Dusén) Rollins, Contr. Gray Herb. 177: 21. 1955.

Perennial herb with stout underground stems; flowers white. Locally common throughout in high alpine, in rock crevices and on steep talus slopes. SL: 695 (1000 m), 732 (1500 m), 841030 (1000 m); DO: 870211 (900-1300 m); DI: 860022 (1250 m); AG: 870014 (900 m); DA: 870106 (850 m).

98. *Onuris hatcheriana* (Gilg) Gilg et Muschl., Bot. Jahrb. Syst. 42: 468. 1909.

Perennial herb, somewhat woody at base forming compact cushions; flowers white. In high alpine in areas of heavy snow drift, reaching

the upper vegetation limit. SL: 730 (1720 m), 735 (1300 m), 850060 (1250 m).

99. *Onuris papillosa* O.E. Schulz, Pflanzenr. 4(105) Heft 86: 202. 1924.

Rhizomatous perennial herb; flowers white-lilac. Occasional in mid and high alpine bogs, and extending onto drier slopes. SL: 636A (1200 m), 850188 (900 m).

100. *Onuris spegazziniana* Gilg. et Muschl., Bot. Jahrb. Syst. 42: 468. 1909.

Perennial herb forming compact cushions; flowers white. Occasional in wet areas in high alpine. DO: 870215 (1100 m).

101. *Sisymbrium commune* (Speg.) Romanc., Parodiana 1(1): 21. 1981.

Perennial herb; flowers white. Weedy species on heavily disturbed areas in subalpine steppe. SL: 850090 (700 m).

102. *Sisymbrium magellanicum* (A.L. Juss. ex Pers.) Hook. f., Fl. Antarct. 243. 1845.

Succulent perennial herb; flowers white. Rare on shaded rock outcrops. SL: 841073 (1000 m); DO: 870231, 870341.

103. *Stenodraba pusilla* (Gill. ex H. et A.) Boelcke var. *patagonica* (Phil.) Boelcke in Correa, Fl. Patag. 4^o: 530. 1984.

Perennial herb forming small cushions. In moist sites in alpine zone; rare. AG: 870017 (1000 m), 870045 (900 m), 870117C; DA: 870116 (900 m), 870136 (950 m).

104. *Thlaspi magellanicum* Comm. ex Poir., Encycl. 7: 541. 1806.

Caespitose perennial herb; flowers white. Common along the drier edges of subalpine and alpine bogs, and in moist forest clearings below treeline. SL: 609 (980 m), 635 (1100 m), 841023 (900 m), 841032 (1000 m); DO: 870281; DI: 860080 (700 m), 870178 (600 m); AG: 870001 (700 m).

105. *Xerodraba pectinata* (Speg.) Skottsb., Kongl. Svenska Vetenskapskad. Handl. n.s. 56(5): 232. 1916.

Stout perennial herb forming hard, round cushions; flowers cream. On arid, strongly exposed slopes in alpine. SL: 641 (1300 m),

841013 (1000 m), 841040 (1050 m), 841122 (1100 m).

Cyperaceae

106. *Carex* spp.

Rhizomatous perennial. SL: 780 (1100 m), 850136 (850 m); AG: 870025 (1000 m); DA: 870147 (850 m).

107. *Carex atropicta* Steud., Syn. Pl. Glumac. 2: 204. 1855.

Rhizomatous perennial. Common in moist slopes in alpine DO: 870208 (700 m).

108. *Carex banksii* Boott, Trans. Linn. Soc. London 20: 119. 1846.

Rhizomatous perennial. In poorly drained soils below treeline and in subalpine bogs. DI: 850892 (450 m), 860051B (550 m); AG: 870002 (700 m).

109. *Carex Barrosii* Nelves, Kew Bull. 1955: 87. 1955.

Rhizomatous perennial. Bog and flush area below treeline. DI: 860051A (550 m).

110. *Carex caduca* Boott, Ill. Carex 4: 157, tab. 508, fig. 1. 1867.

Rhizomatous perennial. Boggy areas below treeline. DI: 850931B (550 m), 860052A (550 m).

111. *Carex canescens* L., Sp. Pl. 974. 1753.

Rhizomatous perennial. Bog and flush areas below treeline. DI: 850893 (450 m).

112. *Carex capitata* L., Syst. Nat., ed. 10: 1261. 1759.

Caespitose perennial. Predominantly in alpine bogs. SL: 850201 (1000 m), 850223 (900 m), 850640 (900 m), 85197B (900 m).

113. *Carex gayana* Desv. in Gay, Fl. Chil. 6: 205. 1854.

Caespitose perennial. Dominant in alpine bog and flush areas. SL: 850074 (600 m), 850215 (900 m), 850226 (900 m), 850230 (900 m), 850238 (900 m), 850634 (900 m); DO: 870318 (750 m); DI: 860069 (580 m).

114. *Carex macloviana* D'Urville, Fl. Iles Malouin. 28. 1825.

Rhizomatous perennial herb. Predominantly in subalpine and alpine bogs, extending into zonal vegetation where moist. SL: 850145 (700 m), 850194 (900 m); DO: 870223 (700 m).

115. *Carex macrosolen* Steud., Syn. Pl. Glumac. 2: 210. 1855.

Perennial herb with stout rhizomes. Locally common in alpine on moist slopes. SL: 799 (900 m), 801 (900 m); DO: 870338 (900 m).

116. *Carex nigra* (L.) Reichard, Fl. Moeno-Francof. 2: 96. 1779.

Rhizomatous perennial. In subalpine and especially alpine bog and flush areas. SL: 850198 (1000 m), 850632 (1000 m); DO: 870304 (700 m); DI: 850886 (500 m), 860057 (580 m); AG: 870098 (650 m).

117. *Carex sorianoi* Barros, Darwiniana 9: 166. 1949.

Perennial with short rhizomes. Locally common in subalpine bogs. SL: 841011 (800 m).

118. *Carex subantarctica* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 7: 180. 1902.

Perennial with short rhizomes. In alpine bogs. Rare. SL: 850631 (900 m).

119. *Carex vallis-pulchrae* Phil., Anales Univ. Chile 93: 487. 1896.

Perennial with slender rhizomes. Frequent in alpine bogs. SL: 850642 (900 m), 850652 (900 m).

120. *Eleocharis albibracteata* Nees et Meyen ex Kunth, Enum. Pl. 2: 143. 1837.

Perennial with slender rhizomes. Common in subalpine bogs, extending into the alpine. SL: 850234 (900 m), 850643 (900 m), 850644 (600 m).

121. *Eleocharis pachycarpa* Desv. in Gay, Fl. Chil. 6: 174. 1854.

Perennial with thickish rhizomes. Infrequent in subalpine bogs. SL: 841093 (600 m).

122. *Schoenus andinus* (Phil.) Pfeiffer, Repert. Spec. Nov. Regni Veg. 23: 348. 1927.

Rhizomatous perennial. In alpine cushion bog. DI: 860025 (950 m).

123. *Scirpus macrolepis* Phil., Anales Univ. Chile 93: 481. 1896.

Stout perennial herb. Common in subalpine bog and flush areas. SL: 850020 (700 m), 850081 (800 m), 850638 (600 m), 850639 (700 m).

Empetraceae

124. *Empetrum rubrum* Vahl ex Willd., Sp. Pl. 4: 713. 1806.

Shrub forming extensive low open mats; flowers brownish-red. Becoming dominant in lower alpine to the west; sparse in the easternmost Sierra de Los Baguales. SL: 617 (1000 m), 850064 (1000 m); DO: 870323 (700-800 m); DI: 850851 (850 m), 850945 (650 m), 870186 (800 m); AG: 870027 (700-900 m), 870088 (950 m); DA: 870140 (850 m).

Ericaceae

125. *Pernettya mucronata* (L. f.) Gaud. ex Spreng., Syst. Veg. 4(2). Cur. Post. 158. 1827.

Shrub forming extensive low thickets; flowers white. Common below treeline in *Nothofagus pumilio* clearings and extending into the alpine to the west. DI: 850854 (500 m), 850879 (600 m), 860016 (500 m); AG: 870081 (650 m).

126. *Pernettya pumila* (L. f.) Hook. var. *pumila*, Icon. Pl. 1: tab. 9. 1837.

Prostrate shrub, forming extensive mats; flowers white. Common in lower alpine to the west, becoming rare to east. SL: 616 (1000 m); DO: 870203 (700 m); DI: 850819 (850 m), 850918 (800 m), 850938 (950 m); AG: 870028 (700-900 m); DA: 870104 (750 m).

Euphorbiaceae

127. *Dysopsis glechomoides* (A. Rich.) Muell. Arg. in DC. Prodr. 15(2): 949. 1866.

Creeping perennial herb; flowers inconspicuously coloured. In forest understory in damp areas. DI: 850904 (600 m); AG: 870069 (650 m).

Fagaceae

128. *Nothofagus antarctica* (G. Forster) Oerst., Bidrag. Egefam. 24: 1871.

Small tree; flowers inconspicuously coloured. Occasional at timberline. DA: 870170A (600 m).

129. *Nothofagus pumilio* (P. et E.) Krasser, Ann. K.K. Naturhist. Hofmus. 11: 163. 1896.

Tree; flowers inconspicuously coloured. Dominant at and below timberline except on Cerro Santa Lucía, where absent. DO: 870343 (700 m); DI: 850908 (500 m), 860045 (750 m); AG: 870077 (600 m), 870086 (650 m); DA: 870158 (700 m).

Gentianaceae

130. *Gentiana prostrata* Haenke in Jacq., Coll. 2: 66, tab. 17. 1788.

Annual (?) herb; flowers pale blue. Common in low elevation bogs. SL: 841049 (600 m), 850035 (700 m).

131. *Gentianella magellanica* (Gaud.) Fabris ex D.M. Moore, Brit. Antarct. Surv. Sci. Rep. 60: 103. 1968.

Annual; flowers deep blue, to white. Common in low elevation bogs towards the east; on Cerro Diente occasionally also in moist forest clearings. SL: 746 (560 m), 841144 (600 m), 850036 (800 m), 850132 (900 m); DO: 870272 (700 m); DI: 860019 (500 m), 860089 (650 m).

Geraniaceae

132. *Erodium cicutarium* (L.) L'Herit. ex Aiton, Hort. Kew. 2: 414. 1789.

Annual; flowers pink. Common in disturbed sites at low elevations. SL: 841062A (450 m), 850139 (850 m).

133. *Geranium sessiliflorum* Cav., Diss. 198, tab. 77, fig. 2. 1787.

Perennial herb with stout stock; flowers pale pink to white. Scattered in subalpine and alpine bogs, or along streamsides, extending into herbfield where moist. SL: 703 (800 m), 753 (750 m), 841055 (600 m), 841138 (600 m), 841160 (600 m); DO: 870253 (900 m); DI: 850810 (450 m), 850939 (800 m).

Gramineae

134. *Agrostis inconspicua* Kunze ex Desv. in Gay, Fl. Chil. 6: 315. 1854.

Caespitose perennial. Common in subalpine and alpine bogs, also on moister slopes. SL: 850169 (1100-1300 m), 850193 (900 m), 850199 (900 m), 850205 (900 m), 85217 (900 m), 850218 (900 m), 850222 (900 m), 850228 (900 m), 850243A (900 m), 850646 (900 m); DO: 870217 (700 m), 870319 (750 m), 870339 (900 m).

135. *Agrostis meyenii* Trin., Mém. Acad. Imp. Sci. Saint-Petersbourg, Ser. 6, Sci. Math., Seconde Pt. Sci. Nat. 4: 312. 1841.

Caespitose perennial herb. Common in cushion bogs and on moist slopes in alpine. AG: 870073 (800 m).

136. *Alopecurus alpinus* J.E. Sm. in Sowerby, Engl. Bot. 16: tab. 1126. 1803.

Stoloniferous perennial herb. In subandean bogs. SL: 850075 (600 m).

137. *Alopecurus heleochloides* Hackel, Repert. Spec. Nov. Regni Veg. 10: 166. 1911.

Caespitose perennial herb. Only seen on edges of temporary pools. SL: 850030 (700 m).

138. *Alopecurus magellanicus* Lam., Tabl. Encycl. 1: 168. 1791.

Stoloniferous perennial herb. In alpine bogs, along streamsides and in herbfield; common. SL: 850075 (800 m), 850245 (900 m), 851154 (850 m); DO: 870342 (850 m).

139. *Alopecurus pratensis* L., Sp. Pl. 60. 1753.

Stoloniferous perennial herb. Locally common in subalpine and alpine bogs and in shaded forest clearings. SL: 850129 (900 m); DI: 850896 (600 m).

140. *Anthoxanthum pusillum* (Hackel) Veldk., Blumea 30: 349. 1985

Caespitose perennial herb. Rare species either in andean bogs or growing on *Bolax gummifera* cushions. SL: 797 (900 m), 850227 (900 m).

141. *Anthoxanthum redolens* (Vahl) Royen, Alp. Fl. New Guinea 2: 1185. 1980.

Caespitose perennial. Locally abundant in subandean bogs in *Nothofagus pumilio* forest. DI: 850894 (450 m).

142. *Bromus coloratus* Steud., Syn. Pl. Glumac. 1: 429. 1854.

Caespitose perennial. Locally common in *Nothofagus pumilio* clearings. DI: 860049B (500 m).

143. *Bromus pellitus* Hackel, Wiss. Ergebn. Schwed. Exped. Magellansl. 3(5): 230. 1900.

Caespitose perennial. Frequent in subalpine steppe and alpine herbfield. SL: 793 (900 m), 850156 (900 m), 870190 (850 m).

144. *Bromus setifolius* J. Presl. var. *setifolius*, in K. Presl, Reliq. Haenk. 1: 261. 1830.

Caespitose perennial. Common in subalpine to lower alpine and in *Nothofagus pumilio* forest clearings. SL: 841106 (600 m), 850125 (750 m), 850178 (900 m); DI: 860049 (500 m).

145. *Bromus setifolius* J. Presl. var. *pictus* (Hook. f.) Skottsbl., Kongl. Svenska Vetenskapsakad. Handl. n.s. 56(5): 179. 1916.

Caespitose perennial. Locally common in *Festuca gracillima* steppe. SL: 850019 (700 m).

146. *Dactylis glomerata* L., Sp. Pl. 71. 1753.

Caespitose perennial herb. Locally common in undisturbed *Nothofagus pumilio* forest. DI: 860050 (500 m).

147. *Deschampsia* sp.

Caespitose perennial herb. Locally common on damp slopes. SL: 784 (1100 m), 794 (900 m).

148. *Deschampsia antarctica* Desv. in Gay, Fl. Chil. 6: 338. 1854.

Perennial forming loose cushions. In alpine bogs; infrequent. SL: 850237 (900 m), 850241 (900 m).

149. *Deschampsia caespitosa* (L.) P. Beauv., Ess. Agrostogr. 91 and 160. 1812.

Caespitose perennial. Prominent species in low elevation bogs. SL: 850076 (800 m).

150. *Deschampsia flexuosa* (L.) Trin., Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 1: 66. 1836.

Caespitose perennial. On dry slopes in subalpine and under *Nothofagus pumilio*. DO: 870219 (700 m); DI: 850891 (500 m), 860070 (550 m).

151. *Deschampsia parvula* (Hook. f.) Desv. in Gay, Fl. Chil. 6: 339. 1854.

Perennial forming small cushions. Widespread, mostly in bog, but also in herbfield. SL: 850031 (800 m), 850116 (1100 m), 850167 (900 m), 850174 (1100-1300 m), 850183 (900 m); DO: 870267; AG: 870007 (1000 m), 870032 (1000 m); DA: 870111 (750 m), 870164 (800 m).

152. *Deschampsia patula* (Phil.) Pilger ex Skottsbl., Kongl. Svenska Vetenskapsakad. Handl. n.s. 56(5): 175. 1916.

Erect perennial. Abundant on dry slopes in subalpine and alpine levels. SL: 841105 (600 m), 850155 (900 m).

153. *Deschampsia venustula* Parodi, Darwiniana 8: 450. 1949.

Caespitose perennial. Common on moister slopes in alpine. SL: 850166 (900 m).

154. *Deyeuxia erythrostachya* Desv. in Gay, Fl. Chil. 6: 324. 1854.

Caespitose perennial. In high alpine bogs, or very moist areas; common. DO: 870348 (1000 m); DA: 870113 (800-900 m), 870114 (800 m).

155. *Deyeuxia poaeoides* (Steud.) Rúgolo in Correa, Fl. Patag. 3: 361. 1978.

Stout caespitose perennial herb. Restricted to edges of andean bogs. SL: 850240 (900 m); DO: 870240.

156. *Elymus patagonicus* Speg., Revista Fac. Agron. Veterin. La Plata 3(32-33): 630. 1897.

Prostrate to erect caespitose perennial. Common throughout in high and subalpine, reaching upper limits of vegetation. SL: 715 (1400 m), 792 (900 m), 841092 (600 m), 841094 (600 m), 850127 (950 m), 850128 (950 m), 850135 (900 m), 850158 (900 m), 850180 (900 m); DO: 870349 (1000 m); DI: 850836 (1000 m), 860023 (1000 m), 870180 (950 m); AG: 870082 (800 m); DA: 870119 (850 m).

157. *Elytrigia repens* (L.) Nevski, Trudy Bot. Inst. Akad. Nauk. SSSR, Ser. 1, 1: 14. 1933.

Rhizomatous perennial. Rare on edges of streams in *Nothofagus pumilio* forest. DO: 870313 (650 m).

158. *Festuca gracillima* Hook. f., Fl. Antarct. 383. 1847.

Caespitose perennial. Dominant tussock species in subandean steppe on eastern mountains, becoming rare at equivalent elevations to west. SL: 789 (900 m), 850151 (850 m); DO: 870216 (1000 m); AG: 870059 (750 m).

159. *Festuca magellanica* Lam., Encycl. 2: 461. 1788.

Caespitose perennial. Common species throughout in low and high andean belts. Frequently grows on *Bolax gummifera* and other cushion species. SL: 713 (1400 m), 790A (900 m), 791 (900 m), 841063 (450 m), 841103 (600 m), 850157 (900 m), 850170 (1100-1300 m), 850656 (1000 m); DO: 870264, 870350 (1000 m); DI: 850880A (1100 m), 860048A (700 m); AG: 870005 (650 m), 870006 (600-700 m), 870058 (650 m), 870080 (650 m); DA: 870112 (750 m).

160. *Festuca purpurascens* Banks et Soland. ex Hook. f., Fl. Antarct. 383. 1847.

Stout stoloniferous perennial. On edge of *Nothofagus pumilio* clearings. DI: 860068 (450 m).

161. *Festuca pyrogea* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 5: 97. 1896.

Caespitose perennial herb. In bogs in the alpine, extending into areas of heavy snow accumulation outside bogs. SL: 850078 (800 m), 850218 (900 m), 850235 (900 m), 870191 (900 m); DO: 870221 (700 m), 870325 (1200 m); DI: 850837A (1000 m), 860021A (1200-1300 m), 860048 (700 m); AG: 870019 (1000 m), 870037A (800 m); DA: 870152 (800 m).

162. *Festuca rubra* L., Sp. Pl. 74. 1753.

Rhizomatous perennial herb. In subandean bog. DO: 870321 (700 m).

163. *Holcus lanatus* L., Sp. Pl. 1048. 1753.

Caespitose perennial herb. Occasional in *Nothofagus pumilio* forest clearings. DI: 860065A (500 m).

164. *Hordeum comosum* J. Presl. in K. Presl. Reliq. Haenk. 1: 327. 1830.

Caespitose perennial. Principally in andean bogs, becoming common towards the drier edges. SL: 850207 (900 m).

165. *Hordeum halophilum* Griseb., Abh. Königl. Ges. Wiss. Göttingen 19: 249. 1874.

Caespitose perennial. Common in andean bogs and on moister slopes in alpine herbfield. SL: 850079 (800 m), 850124 (950 m), 850161 (900 m), 850202 (900 m), 850220 (900 m), 850649 (900 m).

166. *Hordeum marinum* Hudson, Fl. Angl. ed. 2, 1: 57. 1788.

Caespitose perennial. In subandean and andean bogs, towards the drier edges. SL: 841099 (600 m), 850225 (900 m).

167. *Hordeum pubiflorum* Hook. f., Fl. Antarct. 388. 1847.

Caespitose perennial. In damp areas in *Nothofagus pumilio* forest clearings. DI: 860056 (550 m).

168. *Hordeum santacrucense* Parodi et Nicora, Hickenia 1(11): 58. 1977.

Caespitose perennial. Rare in *Festuca gracillima* subandean steppe. SL: 850017 (700 m).

169. *Hordeum setifolium* Parodi ex Nicora, Hickenia 1(11): 59. 1977.

Caespitose perennial. Occasional on edge of low elevations bogs. DO: 870291 (750 m).

170. *Koeleria grisebachii* Domin, Repert. Spec. Nov. Regni Veg. 2: 92. 1906.

Rhizomatous perennial. In bogs in the subandean; rare. SL: 850080 (800 m).

171. *Lopochloa cristata* (L.) Hyl., aff., Bot. Not. 1953: 355. 1953.

Annual. In upper alpine; rae. SL: 850117 (1100 m).

172. *Phleum alpinum* L., Sp. Pl. 59. 1753.

Caespitose perennial. Common grass on dry andean slopes throughout. SL: 841101 (600 m), 850073 (600 m), 850123 (900 m), 850150 (900 m), 850163 (900 m); DO: 870218 (700 m); DI: 850887 (550 m), 860026 (850-900 m); AG: 870092 (650 m).

173. *Phleum pratense* L., Sp. Pl. 59. 1753.

Caespitose perennial herb. In moist depressions or subandean bogs. Locally common. SL: 841154A (850 m); DI: 860063 (550 m).

174. *Poa alopecurus* (Gaud.) Kunth ssp. *alopecurus*, Revis. Gramin. 1: 116. 1829.

Densely caespitose perennial. Dominant grass species in lower and high alpine reaching the upper vegetation limit. Also in the subalpine. SL: 841106 (600 m), 850118 (1100 m), 850175 (1300 m), 850187 (900 m); DO: 870351 (1000 m); DI: 860021B (1200-1300 m), 860031 (1300 m), 870179 (900 m); AG: 870018 (1000 m), 870058A (650 m); DA: 870109 (700 m).

175. *Poa alopecurus* Gaud. (Kunth) ssp. *fuegiana* (Hook. f.) D. M. Moore et Dogg., Brit. Antarct. Surv. Bull. 43: 105. 1976.

Caespitose perennial herb. Widespread in lower alpine to the west on sites with late snow melt or on poorly drained slopes. DO: 870352 (ca. 800 m); DI: 850889A (600 m); AG: 870038 (850 m), 870078 (950 m); DA: 870115 (900 m).

176. *Poa angustifolia* L., Sp. Pl. 67. 1753.

Perennial herb. On moist slopes in subalpine and in bogs in the lower alpine. SL: 850654 (900 m); DO: 870220 (700 m).

177. *Poa annua* L., Sp. Pl. 68. 1753.

Annual. Locally common in sandy riverbed soils. SL: 841098 (600 m).

178. *Poa atropidiformis* Hackel, Wiss. Ergebn. Schwed. Exped. Magellansl. 3(5): 224. 1901.

Caespitose perennial. Locally common in high alpine. SL: 850175 (1300 m).

179. *Poa compressa* L., Sp. Pl. 69. 1753.

Rhizomatous perennial. In subandean bogs, extending into *Nothofagus pumilio* forest clearings. SL: 841100 (600 m); DO: 870312 (650 m).

180. *Poa ibari* Phil., Anales Univ. Chile 94: 170. 1896.

Caespitose perennial. Exclusively on dry slopes from subalpine to high alpine. SL: 841108 (600 m), 850051 (1000 m).

181. *Poa nemoralis* L., Sp. Pl. 69. 1753.

Caespitose perennial. Occasional on arid slopes in alpine. SL: 850179 (900 m).

182. *Poa pratensis* L., Sp. Pl. 67. 1753.

Stoloniferous perennial. Locally common in subalpine and alpine bogs, and along streamsides, extending onto moist slopes. SL: 841107 (600

700 m), 841135 (600 m), 850077 (800 m), 850165 (900 m), 850209 (900 m), 850221 (900 m), 850236 (900 m), 850243 (900 m); DI: 860024 (900 m), 860027A (850 m), 860065 (500 m).

183. *Poa pungionifolia* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 7: 199. 1902.

Perennial herb forming dense mats. On sandy soils in streambeds and on moist slopes in the lower alpine. SL: 841069 (600 m); DO: 870300.

184. *Poa subenervis* Hackel, Ark. Bot. 7(2): 7. 1907.

Rhizomatous perennial. Mostly in andean bogs and poorly drained slopes in alpine herbfield. SL: 841097 (600 m), 850080B (800 m), 850242 (900 m), 850651 (900 m), 850655 (900 m); DO: 870320 (700 m).

185. *Poa superbiens* (Steud.) Haum. et Parodi, Physis (Buenos Aires) 9: 344. 1929.

Robust caespitose perennial. Scattered in *Nothofagus pumilio* clearings. DI: 860064 (550 m).

186. *Rhytidosperma virescens* (Desv.) Nicora, Darwiniana 18: 93. 1973.

Caespitose perennial. Common in subalpine to alpine on eastern mountains. SL: 850126 (950 m); DO: 870232 (700 m).

187. *Rhytidosperma picta* (Nees et Meyen) Nicora var. *picta*, Darwiniana 18: 91. 1973.

Caespitose perennial herb. Locally common in lower alpine. SL: 798 (900 m).

188. *Stipa humilis* Cav., Icon. 5: 41, tab. 466, fig. 1. 1799.

Caespitose perennial. Common at lower edge of subalpine steppe. SL: 850018 (700 m).

189. *Stipa ibari* Phil., Anales Univ. Chile 93: 716. 1896.

Caespitose perennial. Common on very exposed slopes in lower alpine. SL: 850176 (900 m), 850181 (900 m).

190. *Trisetum* spp.

A highly polymorphic genus. Much of our material has not been satisfactorily identified and is placed here. SL: 741 (1300 m), 790 (900 m), 850159 (900 m), 850160 (900 m), 850168 (900

m); DO: 870266; DI: 850880 (1100 m); AG: 870037 (800 m), 870091 (700 m); DA: 870110 (750 m).

191. *Trisetum cumingii* (Nees) Nicora in Correa, Fl. Patag. 3: 250. 1978.

Caespitose perennial herb. Scattered in *Festuca gracillima* subalpine steppe. SL: 841102 (600 m).

192. *Trisetum lasiolepis* Desv. in Gay, Fl. Chil. 6: 346. 1854.

Caespitose perennial herb. Scattered in subalpine bogs. DO: 870292.

193. *Trisetum lechleri* (Steud.) Nicora in Correa, Fl. Patag. 3: 252. 1978.

Caespitose perennial. Common in mid-elevation andean bogs. SL: 850213 (900 m).

194. *Trisetum phleoides* (D'Urv.) Kunth. Revis. Gramin. 1: 101. 1829.

Caespitose perennial. In exposed slopes in lower and upper alpine. DI: 870181 (900 m).

195. *Trisetum spicatum* (L.) Richt., Pl. Eur. 1: 59. 1890.

Caespitose perennial herb. Found locally in *Nothofagus pumilio* clearings. DI: 860055A (550 m).

196. *Trisetum tomentosum* (Desv.) Nicora in Correa, Fl. Patag. 3: 246. 1978.

Rhizomatous perennial herb. In bogs in middle and upper alpine. SL: 850648, 850657 (1000 m).

197. *Vahlodea atropurpurea* (Wahlenb.) Fries ex Hartm., Handb. Skand. Fl., ed. 4, 30. 1843.

Caespitose perennial. Locally common in subalpine bogs. SL: 850138 (850 m).

Gunneraceae

198. *Gunnera magellanica* Lam., Encycl. 3: 61. 1789.

Succulent perennial forming extensive mats. Locally found in bog and seep areas below treeline and extending into the lower alpine. SL: 667 (550 m), 787 (900 m), 841056 (600 m); DO: 870333 (ca. 800 m); DI: 850882 (850 m), 870166 (300 m); DA: 870148 (750 m).

Haloragaceae

199. *Myriophyllum aquaticum* (Vell.) Verdc., Kew Bull. 28: 36. 1973.

Aquatic perennial; flowers greenish. Common on edge of some lagoons. SL: 850029 (850 m).

200. *Myriophyllum quitense* H.B.K., Nov. Gen. Sp. 6: 89. 1823.

Aquatic perennial; flowers greenish. In vernal pools drying in early summer and in pools within bogs. SL: 850155A (900 m), 850189 (900 m).

Hippuridaceae

201. *Hippuris vulgaris* L., Sp. Pl. 4. 1753.

Aquatic rhizomatous perennial herb. In vernal pools drying in early summer. Rare. SL: 850032 (800 m), 850137 (850 m).

Hydrophyllaceae

202. *Phacelia secunda* J.F. Gmel., Syst. Nat. 2: 330. 1791.

Perennial herb with strong stock, tending to form small mats. Scattered in subalpine to lower alpine in east, becoming rare towards the west. SL: 674 (550 m), 841132 (600 m); DO: 870355 (ca. 850 m); DI: 850821 (750 m).

Iridaceae

203. *Phaiophleps biflora* (Thunb.) R.C. Foster ssp. *biflora*, Contr. Gray Herb. 127:43. 1939.

Perennial herb with oblique rhizomes; flowers white to pale cream. Abundant in subalpine and lower alpine in the east, disappearing in the extreme west on Cerro Agudo and Cerro Daudet. SL: 658 (650 m), 672 (550 m), 841042 (750 m), 841156 (600 m), 850098 (900 m); DI: 850834 (700 m), 850952 (600 m).

204. *Phaiophleps biflora* (Thunb.) R.C. Foster spp. *lyckholmii* (Dusén) D.M. Moore, Bot. J. Linn. Soc. 84: 112. 1982.

Perennial herb with oblique rhizomes.

Common in the alpine in the east, becoming rare towards the west. SL: 648 (850 m), 698 (900 m), 841015 (900 m); DO: 870244 (650 m); DI: 870177 (900 m).

205. *Sisyrinchium junceum* E. Mey. ex K. Presl. ssp. *junceum*, Reliq. Haenk. 1: 118. 1827.

Perennial herb with oblique rhizome. Very abundant in *Festuca gracillima* subalpine steppe. SL: 684 (800 m), 841060 (600 m).

206. *Sisyrinchium nanum* Phil., Anales Univ. Chile 91: 620 1895.

Perennial herb with slender rhizomes. Common on sandy soils in subalpine and lower alpine. SL: 659 (650 m), 841141 (600 m); DO: 870231 (700 m).

207. *Sisyrinchium pearcei* Phil., Linnaea 33: 251. 1864.

Perennial herb with oblique rhizome. Abundant below treeline in *Nothofagus pumilio* Clearings. DI: 850811 (650-600 m), 860043 (450 m).

Juncaceae

208. *Juncus arcticus* Willd., Sp. Pl. 2: 206. 1799.

Stout rhizomatous perennial. Local on riverbed sand. SL: 841095 (600 m).

209. *Juncus chilensis* Gay, Fl. Chil. 6: 146. 1854.

Rhizomatous perennial. Common in bogs in lower alpine. SL: 850197A (900 m), 850641 (900 m).

210. *Juncus scheuchzerioides* Gaud., Ann. Sci. Nat. Bot. 5: 100. 1825.

Rhizomatous perennial. Common in subalpine and alpine bogs, also growing on cushion plants outside bogs. SL: 680 (550 m), 841096 (600 m), 850224 (900 m), 850232 (900 m); DO: 870209 (700 m), 870252 (ca. 900 m); DI: 850885 (500 m), 850889 (600 m), 850931A (550 m), 860061 (580 m), 860067 (580 m); AG: 870087 (650 m).

211. *Luzula alopecurus* A.N. Desv., J. Bot. (Desvaux) 1: 159. 1808.

Caespitose perennial. Common in subalpine and lower alpine, also below treeline in

Nothofagus pumilio clearings. Very polymorphic and not readily distinguished from *L. chilensis*. SL: 850244 (900 m); DO: 870280 (ca. 800 m); DI: 850826A (800 m), 860060A (600 m); AG: 870003 (500-800 m), 870042 (ca. 800 m).

212. *Luzula chilensis* Nees et Meyen ex Kunth, Enum. Pl. 3: 312. 1841

Caespitose perennial. In subalpine and alpine, to occasionally below treeline. DO: 870224 (800 m), 870331 (700 m); DI: 850826B (800 m), 860060B (500 m).

213. *Luzula correae* Barros in Correa, Fl. Patag. 2: 118. 1969.

Caespitose perennial forming small cushions. Typically growing in alpine bogs. Common. SL: 781 (1100 m), 850203 (900 m), 850211 (1000 m); DI: 850900 (950 m).

214. *Luzula racemosa* A.N. Desv. fma. *humilis* (Buch.) Buch., Bot. Jahrb. Syst. 12: 133. 1890.

Caespitose perennial. Rare in upper andean bogs. SL: 621 (1000 m).

215. *Luzula* sp.

Perennial forming small cushions, the flowers with three stamens. Grows on other cushion species or freely in bogs. DO: 870293 (ca. 1000 m); DI: 860030 (900 m); AG: 870089 (ca. 800 m).

216. *Marsippospermum grandiflorum* (L. f.) Hook., Icon. Pl. 6: tab. 533. 1843.

Rhizomatous perennial. Local in swampy areas in *Nothofagus pumilio* forests. DI: 850895 (450 m), 860052 (550 m); AG: 870029 (650 m).

217. *Marsippospermum reichei* Buch., Ber. Deutsch. Bot. Ges. 19: 160. 1901.

Rhizomatous perennial. Commonly growing on *Bolax gummifera* cushions in lower to upper alpine. DO: 870259 (1100 m); DI: 850899 (950 m), 860028A (1000 m); AG: 870021 (ca. 750 m); DA: 870151 (800 m).

218. *Rostkovia magellanica* (Lam.) Hook. f., Fl. Antarct. 81. 1844.

Caespitose perennial. In cushion bog below *Nothofagus pumilio* treeline. Common. AG: 870011 (650 m).

Labiatae

219. *Glechoma hederaceum* L., Sp. Pl. 578. 1753.

Perennial herb; flowers blue. Weedy species growing around abandoned human settlements. SL: 645 (650 m).

220. *Lamium amplexicaule* L., Sp. Pl. 579. 1753.

Annual herb; flowers pink. Weedy species around human settlements. SL: 767 (550 m).

221. *Satureja darwinii* (Benth.) Briq., Natürl. Pflanzenfam. 4(3a): 300. 1896.

Procumbent shrub forming extensive, loose mats. Common from subalpine to lower alpine on eastern summits. SL: 637 (1200 m), 655 (1000 m), 841129B (900 m).

Liliaceae

222. *Tristagma nivale* Poepp. fma. *australe* (Neger ex Dusén) Ravenna, Bol. Soc. Argent. Bot. 11(2-3): 151. 1967.

Prostrate geophyte; flowers brownish-green. Occasional in subalpine to lower alpine. SL: 606B (960 m), 841022 (900 m), 841083 (600 m); DO: 870245 (650 m); DI: 850868 (850 m).

Loasaceae

223. *Loasa bergii* Hieron., Bol. Acad. Nac. Ci. 3: 349. 1879.

Twining perennial herb; flowers yellow. Occasional in *Festuca gracillima* subalpine steppe. SL: 606A, 711 (650 m), 841074C (800 m); DO: 870345 (ca. 700 m).

Lycopodiaceae

224. *Lycopodium alboffii* Rolleri, Physis (Buenos Aires) 38(95): 56. 1979.

Perennial. In damp snow basins. Rare. DA: 870156 (800 m).

225. *Lycopodium magellanicum* (P. Beauv.) Sw. var. *magellanicum*, Syn. Fil. 180. 1806.

Perennial. Common just above treeline and in *Nothofagus pumilio* clearings. DI: 860071 (550 m).

Misodendraceae

226. *Misodendrum linearifolium* DC. var. *contractum* Skottsbl., Bot. Jahrb. Syst. 50(4): 390. 1913.

Hemiparasitic dwarf shrub on *Nothofagus pumilio*. Frequent. DI: 860088 (600 m).

227. *Misodendrum punctulatum* Banks ex DC., Coll. Mém. 6: 13, tab. 11. 1830.

Hemiparasitic dwarf shrub on *Nothofagus pumilio*. Rare. DI: 860073 (650 m).

228. *Misodendrum quadrifolium* DC., Prodr. 4: 286. 1830.

Hemiparasitic dwarf shrub on *Nothofagus pumilio*. Frequent. DI: 860074 (650 m), 860087 (600 m).

Onagraceae

229. *Epilobium australe* Poepp. et Hausskn. ex Hausskn., Monogr. Epilobium 269. 1884.

Rhizomatous perennial. Along streamsides from subalpine to upper alpine. SL: 841079 (600 m); DO: 870287 (900 m); DI: 850874 (600 m), 860009 (500 m), 860020 (750 m); AG: 870090 (700 m); DA: 870127 (800 m).

Ophioglossaceae

230. *Botrychium dusenii* (Christ) Alston, Lilloa 30: 107. 1960.

Perennial. Locally abundant in lower alpine on exposed sites. DI: 860005 (750 m).

Orchidaceae

231. *Codonorchis lessonii* (Brongn.) Lindl., Gen. Sp. Orchid. Pl. 411. 1840.

Perennial with tuberous rhizome. In shaded spots under *Nothofagus pumilio*; locally common. DI: 850924 (450 m).

232. *Gavilea lutea* (Pers.) Correa, Bol. Soc. Bot. Argent. 6: 78. 1956.

Perennial with fleshy roots. Occasional in disturbed *Nothofagus pumilio* forest clearings. DI: 850815 (450 m), 850906 (450 m).

Oxalidaceae

233. *Oxalis enneaphylla* Cav., Icon. 5: 7, tab. 411. 1799.

Perennial herb, with stout rhizomes, forming small cushions; flowers pink. Occasional from subalpine to higher alpine on easternmost Bagnuales. SL: 841005 (1000 m), 841012 (800 m).

234. *Oxalis loricata* Dusén, öfvers. Förh. Kongl. Svenska Vetensk. -Akad. 58: 247. 1901.

Strongly rhizomatous perennial herb; flowers pink. On talus slopes. Most abundant in the upper alpine; common. SL: 627 (1300 m); DO: 870284 (900 m); DI: 850800 (1000 m), 860042 (1000 m).

235. *Oxalis magellanica* G. Forster, Commentat. Soc. Regiae Sci. Gott. 9: 33. 1787.

Slender perennial, strongly rhizomatous; flowers white. Mostly below treeline in *Nothofagus pumilio* understory to rarely extending above treeline. AG: 870070 (650 m); DA: 870142 (850 m).

236. *Oxalis patagonica* Speg., Revista Fac. Agron. Veterin. La Plata 3(30-31): 501. 1897.

Perennial herb with stout rhizomes, forming small cushions. Common throughout from subalpine to high alpine. SL: 649 (1100 m), 850093 (900 m); DO: 870243 (1100 m); DI: 850803 (1000 m); AG: 870041 (1000 m); DA: 870118 (750 m).

237. *Oxalis squamoso-radicosa* Steud., Flora 39: 443. 1856.

Slender perennial herb. Scattered in *Festuca gracillima* subandean steppe on Cerro Santa Lucia and Cerro Donoso. SL: 647 (850 m), 850662 (750 m); DO: 870340 (650 m).

Papilionaceae

238. *Adesmia boronioides* Hook. f., Fl. Antarct. 257. 1846.

Common in lower reaches of subalpine. SL: 841067 (450 m).

239. *Adesmia aurantiaca* (Dusén) Burk., Darwiniana 12: 131. 1960.

Locally common, rhizomatous perennial,

seen only in bog and flush formations at low elevation. SL: 841130 (550 m).

240. *Adesmia burkartii* Correa, Darwiniana 23: 153. 1981.

Rhizomatous perennial. On dry slopes in the alpine and subalpine; rare. SL: 841128 (900 m).

241. *Adesmia lotoides* Hook. f., Fl. Antarct. 255. 1845.

Rhizomatous perennial herb. Common on sandy soils in river beds and in subalpine. SL: 812 (550 m), 850069A (700 m); DO: 870271 (850 m); DI: 860033 (700 m).

242. *Adesmia parvifolia* Phil., Linnaea 28: 683. 1858.

Caespitose perennial herb, widespread in lower and upper alpine, except on very westernmost summits. SL: 841061 (600 m), 841082 (600 m), 841135A (580 m), 850975B (900 m); DO: 870288 (1000 m); DI: 850956B, 860039 (800 m).

243. *Adesmia punila* Hook. f., Fl. Antarct. 255. 1845.

Locally common rhizomatous perennial herb in moist habitats in subalpine and alpine forming extensive mat. SL: 801 (900 m), 802 (900 m), 808 (550 m), 809 (550 m), 841057 (600 m), 841084 (550 m), 841130 (600 m); DO: 870296 (ca. 900 m); DI: 850825B (800 m), 850844 (850 m), 850942 (850 m).

244. *Adesmia salicornioides* Speg., Anales Soc. Ci. Argent. 47: 274. 1899

Common cushion species growing in very exposed habitats in alpine. SL: 728 (1000 m), 850101A (900 m); DO: 870212 (900-1000 m); DI: 850839 (750 m).

245. *Adesmia suffocata* Hook. f., Fl. Antarct. 256. 1845.

Rhizomatous perennial herb. Common on sandy soils in subalpine to lower alpine. Only on Cerro Santa Lucia. SL: 813 (550 m), 900 (803 m), 841085 (550 m), 841142 (550 m).

246. *Adesmia villosa* Hook. f., Fl. Antarct. 256. 1845.

Rhizomatous perennial herb. Locally abundant in subalpine and alpine. SL: 763 (1050

m), 841051 (450 m), 841114 (900 m), 841136A (600 m); DO: 870279 (ca. 800 m); DI: 850901 (850 m).

247. *Anarthrophyllum desideratum* (DC). Benth. var. *desideratum*, Gen. Pl. 1: 478. 1865.

Low growing shrub. On very exposed slopes; locally common. SL: 841000 (900 m); DO: 870337 (ca. 900 m).

248. *Astragalus* sp.

Deeply rooted perennial herb. Rare species, on dry slopes in subalpine. SL: 614 (500 m), 850177 (700 m), 870192 (650 m).

249. *Astragalus nivicola* Gómez-Sosa, Hickenia 1(17): 93. 1977.

Caespitose perennial; flowers bluish-purple. Common in damp areas in subalpine and alpine. SL: 624 (1300 m), 764 (1050 m), 841054 (600 m); DO: 870327 (1100 m); DI: 850841 (900 m), 850884 (900 m).

250. *Lathyrus magellanicus* Lam. var. *magellanicus*. Encycl. 2: 708. 1788.

Scrambling rhizomatous perennial; flowers bluish-purple. Below treeline in *Nothofagus pumilio* clearings. Very abundant. DI: 850857 (450 m).

251. *Lathyrus magellanicus* Lam. var. *glaucescens* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 7: 279. 1902.

Low growing rhizomatous perennial; flowers pink. In sandy soils and along streamsides in bog habitats. SL: 665 (650 m), 841045 (700 m), 841131 (600 m), 841136B (600 m), 841158 (600 m).

252. *Trifolium spadiceum* L., Fl. Suec., ed. 2. 261. 1755.

Perennial. Common in disturbed areas at low elevations. SL: 772 (550 m).

253. *Vicia bijuga* Gill. ex H. et A., Bot. Misc. 3: 197. 1833.

Rhizomatous perennial, very polymorphic species; flowers bluish-purple. In *Festuca gracillima* subandean steppe to the high alpine. SL: 626 (1350 m), 664 (650 m), 733 (1500 m), 841018 (800 m), 841019 (1000 m), 841029 (900 m), 841081 (600 m), 841112 (700 m), 841129A (900 m), 841149 (1000 m), 850096 (900 m); DO:

870262 (ca. 900 m); DI: 850824 (1000 m), 850917 (850 m).

254. *Vicia graminea* J.E. Sm. In Rees, Cycl. 38, N° 27. 1818.

Scandent perennial herb; flowers pink to light blue. SL: 783 (700 m).

255. *Vicia magellanica* Hook. f., Fl. Antarct. 257. 1846.

Scandent perennial herb; flowers pink to light blue. Common at edges of subalpine bogs in east and in *Nothofagus pumilio* forest clearings to the west. SL: 783 (700 m), 850055 (800 m), 850069 (600 m); DO: 870222 (700 m) DI: 850812 (500 m).

Philesiaceae

256. *Luzuriaga marginata* (Banks et Soland. ex Gaertn.) Benth., Gen. Pl. 3: 768. 1883.

Perennial, woody at base; flowers white. Found only once on shaded steam bank below treeline. DI: 850937 (500 m).

Plantaginaceae

257. *Plantago barbata* G. Forster ssp. *austrorandina* Rahn, Nord. J. Bot. 4(5): 615. 1984.

Perennial herb forming dense cushions; flowers inconspicuously coloured. In andean bogs; common. SL: 850050 (900 m), 850206 (1000 m), 841009 (800 m), 841039 (1000 m); AG: 870047 (1000 m); DA: 870128 (800 m).

258. *Plantago barbata* G. Forster ssp. *monanthos* (D'Urv.) Rahn, Nord. J. Bot. 4(5): 613. 1984.

Lax caespitose herb; flowers inconspicuously coloured. In bog and flush areas below treeline. AG: 870102 (650 m).

259. *Plantago sempervivoides* Dusén, Ark. Bot. 7(2): 37. 1907.

Perennial herb forming hard cushion. Common in lower and middle alpine. SL: 654 (1000 m), 841012A (900 m).

260. *Plantago uniglumis* Wallr. ex Walp., Nov. Actorum Acad. Caes. Leop.-Carol. Nat. Cur. 19, suppl. 1: 402. 1843.

Perennial herb forming hard cushion. On dry slopes in subalpine and alpine; locally common. SL: 705 (800 m); DI: 850864 (800 m).

Plumbaginaceae

261. *Armeria maritima* (Mill.) Willd. ssp. *andina* (Poepp. ex Boiss.) D.M. Moore et Yates, Bot. Not. 127: 191. 1974.

Perennial, woody at base, forming small, compact cushions. Widespread from subalpine to alpine, in bog habitats and on moist slopes. SL: 669 (550 m), 841157 (600 m); DO: 870225 (700-1000 m); DI: 850827 (650 m); AG: 870061 (650 m); DA: 870150 (800 m).

Polemoniaceae

262. *Microsteris gracilis* (Dougl. ex Hook.) Greene, Pittonia 3: 300. 1898.

Common annual species in open habitats and disturbed sites at lower elevations; flowers light pink to almost white. SL: 675 (550 m), 841050B (700 m); DI: 860047 (600 m).

263. *Polemonium micranthum* Benth. in DC. Prodr. 9: 318. 1845.

Perennial herb; flowers white to bluish. Locally abundant at lower elevations on open dry sites. SL: 841062B (450 m), 841080 (650 m).

Polygalaceae

264. *Polygala salasiana* Gay, Fl. Chil. 1: 237. 1846.

Perennial herb, with slender creeping rhizomes; flowers pale blue. Rare in the lower subalpine; seen only on Cerro Santa Lucia. SL: 773 (600 m).

Polygonaceae

265. *Polygonum aviculare* L., Sp. Pl. 362. 1753.

Annual; flowers greenish-white. Common at lower elevations in disturbed sites. SL: 810 (550 m), 850231 (900 m).

266. *Rumex acetosella* L., Sp. Pl. 338. 1753.

Perennial; flowers inconspicuously coloured. Frequent on disturbed sites at lower elevations. SL: 662 (650 m).

267. *Rumex crispissimus* O.K., Revisio Gen. Pl. 3(2): 269. 1898.

Sprawling perennial herb; flowers inconspicuously coloured. Seen only on the shores of snow feed lakes. SL: 850146 (1000 m), 850192 (1000 m).

Portulacaceae

268. *Calandrinia caespitosa* Gill. ex Arn. var. *caespitosa*, Edinburgh J. Nat. Geogr. Sci. 3: 356. 1831.

Perennial herb with deep tap root; flowers white to very pale salmon. Common at the edge of snow feed lakes and in depressions maintained moist due to late snow melt. SL: 779 (1100 m), 841036A (1100 m), 841064 (600 m), 850049 (1100 m), 850186 (1000 m); DO: 870283 (ca. 1000 m).

Primulaceae

269. *Primula magellanica* Lehm., Monogr. Primul. 62, tab. 6. 1817.

Stoloniferous perennial herb; flowers white to pink, frequent in bogs in the lower alpine and in open swampy sites in *Nothofagus pumilio* forest. SL: 612 (900 m), 840149 (900 m), 841014 (800 m), 841076 (900 m), 841091 (800 m); DO: 870330 (ca. 900 m); DI: 850907 (500 m), 860018 (500 m).

270. *Samolus repens* (J.R. et G. Forster) Pers., Syn. Pl. 1: 171. 1805.

Perennial herb with white to cream flowers. Seen only once along steamside on Cerro Daudet. DA: 870154 (800 m).

Proteaceae

271. *Embothrium coccineum* J.R. et G. Forster, Char. Gen. Pl. 16, tab. 8, figs. g-m. 1776.

Small tree; flowers scarlet. Scattered in disturbed *Nothofagus pumilio* forest. DI: 860013 (500 m), 860044 (600 m).

Ranunculaceae

272. *Anemone multifida* Poir., Encycl., Suppl. 1: 364. 1810.

Rhizomatous perennial herb; flowers pale cream. Locally common on moist soils and at the edges of bogs from the subalpine into the alpine. SL: 668 (550 m), 841065 (600 m); DI: 850860 (450 m).

273. *Caltha sagittata* Cav., Icon. 5: 8, tab. 414. 1799.

Perennial herb forming large extensive interconnected mats; flowers pale-greenish cream. Locally common on damp soils and at the edges of bogs from the subalpine into the lower alpine. SL: 679 (550 m), 721 (1300 m), 841007 (800 m), 850070 (600 m); DO: 870228 (700 m); DI: 850902 (900 m); AG: 870062 (700 m).

274. *Hamadryas delfinii* Phil. ex Reiche, Anales Univ. Chile 88: 77. 1894.

Rhizomatous perennial; flowers brownish-red. Only on the two easternmost summits. Common in the lower alpine. SL: 607 (980 m), 629 (1200 m), 841124 (1000 m), 850182 (950 m); DO: 870298 (900 m), 870346 (700 m).

275. *Hamadryas kingii* Hook. f., Fl. Antarct. 228. 1845.

Rhizomatous perennial, with scattered connected rosettes; flowers dark blue with yellow. Common species in the alpine reaching the upper vegetation limit and extending into the lower alpine on the westernmost summits. SL: 628 (1350 m), 841006 (1000 m), 850099 (1100 m); DO: 870294 (900-1300 m); DI: 850832 (1000 m), 850833 (1000 m); AG: 870039 (ca. 1100 m); DA: 870135 (850 m).

276. *Hamadryas sempervivoides* Sprague, Hooker's Icon. Pl. 28, tab. 2748. 1905.

Perennial herb forming extensive hard cushions; flowers bright yellow. Restricted to alpine bogs in alpine; becoming increasingly common from east to west. *Hamadryas sempervivoides* in highly variable morphologically on Cerro Agudo and Cerro Daudet, possibly due hybridization with other species. SL: 650 (1100 m), 737 (1300 m), 841087 (900 m); DO: 870328 (1100 m); DI: 850817 (900 m), 870184 (900 m); AG: 870033 (1000 m), 870034 (1000 m), 870035 (900 m), 870055 (650 m), 870057 (650 m),

870076 (650 m); DA: 870122 (850 m), 870162 (800 m).

277. *Hamadryas* sp.

Perennial herb with connecting rhizome between rosettes; flowers similar to those of *H. kingii*. Plants found on all five summits, possibly representing F1 hybrids between *H. kingii* and *H. sempervivoides*, or alternatively an undescribed species are placed here until further study. Such plants occupy the ecotone between high andean bogs (habitat of *H. sempervivoides*) and drier alpine slopes (habitat of *H. kingii*). SL: 709 (1100 m), 720 (1300 m); DO: 870347 (ca. 1000 m); DI: 850801 (900 m), 850842 (900 m), 850919 (850 m), 870183 (1050 m); AG: 870076 (ca. 850 m); DA: 870161 (800 m).

278. *Hamadryas magellanica* Lam., Encycl. 3: 67. 1789.

Rhizomatous perennial herb; flowers pale yellow. Seen only just below treeline at edge of bog and flush area; rare. AG: 870101 (650 m).

279. *Ranunculus aquatilis* L., Sp. Pl. 556. 1753.

Rooted aquatic perennial; flowers white. At edge of snow filled hollows drying in early summer. SL: 850106 (850 m), 850114A (850 m), 850148 (800 m); DI: 860058 (580 m).

280. *Ranunculus biternatus* J.E. Sm. in Rees, Cycl. 29, N° 48. 1815.

Prostrate perennial; flowers yellow. Rare in subalpine bogs on Cerro Santa Lucia. SL: 771 (550 m).

281. *Ranunculus fuegianus* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 5: 43. 1896.

Creeping perennial rooting at nodes; flowers yellow. At the edges of pools in subalpine bogs or in clearings in *Nothofagus pumilio* forest. SL: 841010 (800 m), 841118 (600 m), 850033 (800 m), 850208 (900 m); DI: 850856 (550 m), 860062 (580 m); AG: 870079 (650 m).

282. *Ranunculus peduncularis* J.E. Sm. var. *peduncularis*, in Rees, Cycl. 29, N° 49. 1815.

Perennial herb, rooting at nodes; flowers yellow. In subandean and lower andean bogs, frequent along internal watercourses. SL: 601 (840 m), 632 (1100 m), 841008 (800 m), 841117 (900 m), DI: 850808 (450 m); AG: 870067 (650 m).

283. *Ranunculus pseudotrullifolius* Skottsbo., Kongl. Svenska Vetenskapskad. Handl. n.s. 50(3): 32. 1913.

Prostrate perennial herb, rooting at nodes; flowers yellow. Found only at edges of lakes and pools, drying back in early summer. SL: 850115A (850 m), 850119A (800 m).

284. *Ranunculus sericocephalus* Hook. f., Fl. Antarct. 225. 1845.

Perennial herb rooting at nodes; flowers yellow. Rare in andean bogs to the east, and below treeline to the west. SL: 850239 (900 m); AG: 870063 (600 m).

285. *Ranunculus uniflorus* Phil. ex Reiche fma. *uniflorus*, Anales Univ. Chile 88: 70. 1894.

Succulent perennial herb rooting at nodes; flowers yellow. Common in subandean bogs along internal watercourses. SL: 678 (550 m), 850219 (900 m), 850637 (900 m); DI: 850933 (500 m).

Rhamnaceae

286. *Discaria chacaye* (G. Don) Tort., Parodiana 21(1): 80. 1983.

Spiny, low growing shrub; flowers white. Sporadic in exposed, disturbed sites in *Nothofagus pumilio* forest, or in *Festuca gracillima* subandean steppe. SL: 788 (1000 m); DI: 850809 (450 m).

Rosaceae

287. *Acaena antarctica* Hook. f., Fl. Antarct. 269. 1846.

Prostrate subshrub forming large mats; flowers inconspicuously coloured. Found on damp slopes or in andean bogs throughout. SL: 850184 (900 m); DI: 860059 (600 m), 870179C (900 m); AG: 870051 (650 m); DA: 870107 (700 m).

288. *Acaena* cf. *leptacantha* Phil., Linnaea 33: 66. 1864.

Subshrub; flowers inconspicuously coloured. Seen only once on the northern side of the Ba-guales valley. SL: 841033 (ca. 1000 m).

289. *Acaena lucida* (Lam.) Vahl, Enum. Pl. 1: 296. 1804.

Subshrub, flowers reddish. Locally common in the lower alpine. SL: 870188 (900 m); DO: 870200 (1100 m); DI: 870175 (700 m).

290. *Acaena magellanica* (Lam.) Vahl, Enum. Pl. 1: 297. 1804.

Spreading subshrub; flowers with conspicuous red stigmas. Fairly common throughout in damp situations, and especially towards the edges of bogs, both above and below treeline. SL: 666 (550 m), 841119 (600 m); DO: 870202 (1100 m), 870247 (700 m); DI: 850828 (800 m), 850840 (1000 m), 850858 (900 m); AG: 870020 (700 m), 870031 (750 m); DA: 870144 (850 m).

291. *Acaena ovalifolia* R. et P., Fl. Peruv. Chil. 67, tab. 103. 1798.

Perennial herb. Heads white. Locally common alongside streamsides in shaded sites in *Nothofagus pumilio* forests. DO: 870310 (650 m); DI: 860079 (700 m), 860086 (450 m).

292. *Acaena pinnatifida* R. et P., Fl. Peruv. Chil. 1: 68, tab. 104. 1798.

Perennial herb; flowers greenish. Locally common in *Festuca gracillima* subandean steppe, extending into alpine. SL: 670 (550 m).

293. *Acaena platyacantha* Speg., Revista Fac. Agron. Veterin. La Plata 3 (30-31): 515. 1897.

Perennial herb; heads with greenish flower. Very common in *Festuca gracillima* subandean steppe, extending into the alpine proper. Sometimes in bogs formations. SL: 671 (550 m), 850068 (700 m), 870189 (800 m); DO: 870265 (ca. 900 m); DI: 850829 (900 m), 850864 (900 m).

294. *Acaena sericea* Jacq. f., Ecl. Pl. 1: 81, tab. 55. 1813.

Subshrub; flowers greenish. Found only at low elevations, where common. SL: 841072 (450 m); DO: 870316 (650 m).

295. *Geum involucratum* Pers., Syn. Pl. 2: 57. 1806.

Perennial herb with stout rootstock; flowers white. Scattered in *Nothofagus pumilio* understorey. AG: 870074 (650 m).

296. *Geum magellanicum* Pers., Syn. Pl. 2: 57. 1806.

Perennial herb with stout rootstock; flowers

yellow. Common species at edges of subalpine and alpine bogs, also in damp areas in *Nothofagus pumilio* forests. SL: 749 (750 m), 841152 (850 m); DI: 850861 (450 m).

297. *Rubus geoides* J.E. Sm., Pl. Icon. Ined., tab. 19. 1789.

Creeping perennial rooting at nodes; flowers white. In open sites in *Nothofagus pumilio* forest. DI: 850909 (600 m).

Rubiaceae

298. *Galium antarcticum* Hook. f., Fl. Antarct. 303 bis. 1846.

Slender decumbent perennial; flowers white. Common along water courses in alpine bogs and in wetter depressions in *Festuca gracillima* steppe. SL: 748 (750 m), 841048 (650 m), 841113 (900 m); DO: 870317 (750 m).

299. *Galium fuegianum* Hook. f., Fl. Antarct. 302 bis. 1846.

Scrambling perennial herb; flowers cream. Along steam borders in *Nothofagus pumilio* forest; uncommon. DI: 850934 (500 m), 860097.

300. *Oreopolus glacialis* (Poepp.) Ricardi var. *glacialis*, Gayana 6: 7. 1963.

Perennial herb forming dense cushions; flowers bright yellow. Often dominant in lower and middle alpine. SL: 630 (1200 m), 841003 (900 m); DI: 850831 (850-900 m).

Ruppiaceae

301. *Ruppia* sp.

Floating perennial aquatic. In snow feed lake; rare. SL: 850172 (1000 m).

Santalaceae

302. *Arjona patagonica* Hombr. et Jacq., Voy. Pôle Sud, Atlas, tab. 15A. 1845.

Stoloniferous perennial herb; flowers pale pink to dark pink with age. Common in subalpine, extending into alpine, except on the westernmost summits. SL: 758 (700 m), 850024 (900 m), 850095 (900 m), 860007 (900 m); DO: 870237

(600-700 m); DI: 850850 (850 m), 870176 (750 m).

303. *Arjona pusilla* Hook. f., Fl. Antarct. 342. 1846.

Stoloniferous perennial herb; flowers white. Found only in bogs in the subandean on Cerro Santa Lucia. SL: 707 (800 m), 841137A (600 m), 871078 (700 m).

304. *Myoschilos oblonga* R. et P., Syst. Veg. Fl. Peruv. Chil. 73. 1798.

Shrub; flowers brown. In dense, undisturbed *Nothofagus pumilio* forest; uncommon. DI: 850935 (500 m), 860090 (650 m).

305. *Nanodea muscosa* Banks ex C. Gaertn., Suppl. Carp. 251, tab. 225. 1805.

Creeping perennial herb; flowers dark red. Exclusively below treeline in cushion bogs; common. AG: 870170B (650 m).

Saxifragaceae

306. *Escallonia alpina* Poepp. ex DC., Prodr. 4: 665. 1830.

Erect to spreading shrub; flowers white to dark pink. Common in *Nothofagus pumilio* understorey, also extending into the lower alpine, where it forms low, windswept mats. DO: 870204 (700 m); DI: 850859 (450 m).

307. *Ribes cucullatum* H. et A., Bot. Misc. 3: 340. 1833.

Erect shrub, often forming dense thickets above treeline; flowers wine red. In poorly drained soils in *Nothofagus pumilio* forest to extending into the lower alpine. SL: 850061 (900 m); DO: 870285 (ca. 750 m); DI: 850920 (850 m), 850930 (550 m), 870173 (500 m), 870187 (560 m); AG: 870071 (650 m).

308. *Ribes magellanicum* Poir., Encycl. Suppl. 2: 856. 1812.

Erect shrub; flowers pink to wine-red. At edges of *Nothofagus pumilio* forest, or scattered in subandean *Festuca gracillima* steppe. SL: 644 (650 m); DI: 870172 (450 m).

309. *Saxifraga magellanica* Poir., Encycl., 6: 686. 1805.

Caespitose perennial herb; flowers white. Often common in lower alpine in wet sites, and below treeline in waterlogged sites. SL: 656 (700 m), 841065 (600 m), 841077 (800 m), 841139A (900 m), 850046 (1100 m); DO: 870256 (1250 m); DI: 850849 (900 m), 860096 (800 m); AG: 870022 (700-1000 m), 870060 (ca. 700 m); DA: 870108 (700 m).

310. *Saxifragella bicuspidata* (Hook. f.) Engler, Natürl. Pflanzenfam. 3(2): 61. 1891.

Perennial herb forming small, compact cushions; flowers greenish. Patchily distributed in areas of heavy snow accumulation, or in shaded, moist sites at the base of rocks; uncommon. Seen only at high elevations on Cerro Santa Lucia and again on Cerro Agudo and Cerro Daudet. SL: 736 (1300 m), 850038 (1150 m); AG: 870072A (ca. 950 m); DA: 870165 (800 m).

Scrophulariaceae

311. *Calceolaria biflora* Lam., Encycl. 1: 556. 1785.

Perennial herb with short rhizomes; flowers pale yellow. Common at subandean elevations, either in *Festuca gracillima* steppe or in *Nothofagus pumilio* clearings. SL: 673 (550 m), 841134 (600 m); DO: 870275 (700 m); DI: 850926 (600 m), 870871 (550 m).

312. *Calceolaria tenella* Poepp., Nov. Gen. Sp. Pl. 3: 76, tab. 287. 1845.

Perennial herb forming small mats; flowers pale yellow. In shaded habitats along streamsides. Seen only on Cerro Diente. DI: 850843 (450 m).

313. *Calceolaria uniflora* Lam., Tabl. Encycl. 1: 52. 1791.

Perennial herb forming extensive mats or cushions; flowers orange-yellow, the lower lip with a large wine-red spot with white border. Common from the subalpine to the high alpine. SL: 702 (600 m), 841115 (600 m); DO: 870303 (1000-1100 m); DI: 850820 (800-900 m), 850932 (500 m); AG: 870096 (800 m).

314. *Euphrasia antarctica* Benth. in DC. Prodr. 10: 555. 1846.

Small annual species; flowers creamish-white. In bog formations from the subalpine to the lo-

wer alpine forming conspicuous swards when in flower; locally common. SL: 747 (750 m), 850037 (800 m); 850066 (600 m), 850214 (900 m); DO: 870305 (760 m).

315. *Limosella australis* R. Br., Prodr. 443. 1810.

Annual (?); flowers pale purplish-blue, flowering as water recedes during the late summer. SL: 768 (900 m), 850107 (800 m), 850130 (800 m), 850133 (1000 m).

316. *Ourisia breviflora* Benth. in DC. Prodr. 10: 493. 1846.

Delicate species growing in shaded situations along stream banks in *Nothofagus pumilio* forest, to occasionally above treeline in cushions bogs. DI: 860076 (650 m); AG: 870049 (650 m); DA: 870124 (800 m).

317. *Ourisia poeppigii* Benth. in DC. Prodr. 10: 492. 1846.

Perennial herb with thick rhizomes; flowers scarlet. Restricted to permanently wet stream sides, from below treeline, to the lower alpine. Often growing below small waterfalls. Seen only on Cerro Diente. DI: 850852 (450 m), 860085 (850 m).

318. *Veronica peregrina* L., Sp. Pl. 14. 1753.

Annual; flowers white to creamish-white. In seep and bog areas in the lower subalpine and on poorly drained sites in *Festuca gracillima* steppe. SL: 667 (550 m), 841044 (700 m), 850109 (800 m), 850154 (800 m).

Solanaceae

319. *Benthamiella azurella* (Skotts.) Soriano, Darwiniana 8: 259. 1948.

Perennial herb forming hard cushions; flowers yellow. Common in the middle alpine on Cerro Santa Lucia; not seen elsewhere. SL: 652 (1000 m), 841041 (1100 m), 841120 (1000 m).

320. *Benthamiella lanata* Soriano, Darwiniana 8: 249. 1948.

Perennial herb forming hard cushions. Of rare occurrence on Cerro Santa Lucia. SL: 850101 (1000 m).

321. *Benthamiella nordenskjoeldii* Dusén ex N.E. Br., Hooker's Icon. Pl. 27, tab. 2636A. 1900.

Perennial herb with some woodiness forming large soft cushions; flowers white. Common in the middle to upper alpine on Cerro Santa Lucia, and in high alpine bogs on Cerro Donoso. SL: 642 (1200 m), 727 (1200 m), 841036B (1000 m), 841109 (1100 m); DO: 870242 (1100 m).

322. *Benthaniella patagonica* Speg., Anales Soc. Ci. Argent. 15: 110. 1883.

Infrequent, small cushion species growing in the lower alpine and rarely in the upper reaches of the subalpine. Found only on Cerro Santa Lucia. SL: 602 (840 m), 850204 (800 m).

Thymelaeaceae

323. *Drapetes muscosus* Banks ex Lam., J. Hist. Nat. 1: 189. 1792.

Perennial herb forming lax cushions. Rare in cushion bogs above treeline. AG: 870048 (800 m); DA: 870126 (800 m).

Umbelliferae

324. *Azorella ameghinii* Speg., Anales Soc. Ci. Argent. 48: 54. 1899.

Perennial herb forming dense cushions. Very rare on exposed, wind swept slopes. SL: 850659 (750 m).

325. *Azorella filamentosa* Lam., Encycl. 1: 344. 1783.

Perennial herb forming extensive soft cushions; flowers greenish. In bogs in the lower alpine. SL: 775 (900 m), 776 (900 m); DO: 870201 (700 m); DI: 850805 (650 m).

326. *Azorella fuegiana* Speg., Anales Mus. Nac. Hist. Nat. Buenos Aires 5: 58. 1896.

Rhizomatous perennial herb; flowers pale yellow-green. Most common in *Festuca gracillima* subandean steppe, and below treeline in clearings. Also extending into the middle alpine. SL: 631 (1100 m), 706B (860 m), 841017 (850 m), 841150 (1000 m); DO: 870286 (1000 m); DI: 850941 (950 m); AG: 870044 (900 m).

327. *Azorella lycopodioides* Gaud., Ann. Sci. Nat. (Paris) 5: 105. 1825.

Perennial herb, stems woody at base, forming

large, dense cushions; flowers green. Common in middle and upper alpine bogs, becoming dominant on the wetter Cerro Agudo and Cerro Daudet. SL: 841037 (1000 m), 850057 (1100 m), 850190 (1000 m); DO: 870234 (900-1100 m); DI: 850869 (900 m); AG: 870050 (ca. 800 m); DA: 870132 (800 m), 870168 (700 m).

328. *Azorella monantha* Clos in Gay, Fl. Chil. 3: 79. 1848.

Perennial herb, stems woody at base, forming hard, often elevated cushions; flowers pale yellow. Very common species in lower alpine, extending into the subalpine and occasionally in the high alpine. SL: 804 (900 m), 850085 (800 m); DO: 870254 (1100 m); DI: 850863 (800 m).

329. *Azorella selago* Hook. f., Fl. Antarct. 284. 1846.

Perennial herb, stems woody at base; flowers greenish. Restricted to the two westernmost summits, there only locally abundant in very wet habitats. AG: 870072 (ca. 900 m); DA: 870167 (800 m).

330. *Azorella trifurcata* (Gaertn.) Hook., Icon. Pl. 6: tab. 539. 1843.

Perennial herb, stems woody at base, forming large flat cushions; flowers yellow. Infrequent species, found only on the drier edges of subandean bogs, and in wet sites in *Nothofagus pumilio* forest. SL: 850661 (600 m); DO: 870307 (700 m); DI: 850951 (450-500 m), 860095 (450 m).

331. *Bolax gummifera* (Lam.) Spreng., Syst. Veg. 1: 879. 1824.

Perennial herb, stems woody at base, forming compact elevated cushions; flowers green. Common species, throughout, becoming dominant in the alpine on the westernmost summits. Below treeline plants frequently lax in habit. SL: 694 (1000 m), 841024 (1000 m); DO: 870258 (1100 m); DI: 850838 (1000 m); AG: 870084 (1000 m); DA: 870125 (850 m).

332. *Bowlesia tropaeolifolia* Gill. et Hook., Bot. Misc. 1: 325. 1830.

Caespitose perennial herb. Rare species, found in shaded habits at the base of rocks. SL: 850040 (1100 m).

333. *Huanaca acaulis* Cav., Icon. 6: 18, tab. 528, fig. 2. 1800.

Perennial herb; flowers pale yellow. On steep scree slopes in lower to upper alpine; occasional. SL: 716 (1300 m), 850039 (900 m).

334. *Huanaca andina* (Phil.) Phil., *Linnaea* 33: 93. 1864.

Perennial herb. In subandean bog; locally common only. SL: 745 (560 m).

335. *Mulinum spinosum* (Cav.) Pers., *Syn. Pl.* 1: 309. 1805.

Spiny shrub forming elevated lax cushions; flowers greenish yellow. Just reaching lower subalpine; otherwise absent. DO: 870315 (500 m).

336. *Mulinum valentinii* Speg., *Anales Soc. Ci. Argent.* 48: 57. 1899.

Shrub forming hard, low growing, cushions; flowers greenish-yellow. Common on wind-swept, exposed talus slopes on the two easternmost mountains. SL: 643 (1200 m), 669 (900 m), 841002 (1000 m), 850056 (1100 m), 850134 (1000 m); DO: 870276 (800-900 m).

337. *Osmorhiza chilensis* H. et A., *Bot. Beechey Voy.* 26. 1830.

Rhizomatous perennial herb; flowers white. Shade loving species, only occasional in lush areas of vegetation. SL: 850110 (850 m).

338. *Osmorhiza depauperata* Phil., *Anales Univ. Chile* 85: 726. 1894.

Delicate, rhizomatous perennial herb. Typically growing beneath *Nothofagus pumilio*. DO: 870311 (600 m); DI: 850813 (500 m); AG: 870066 (650 m).

339. *Schizeilema ranunculus* (D'Urv.) Domin, *Bot. Jahrb. Syst.* 40: 576. 1908.

Perennial herb, in subalpine and lower alpine bogs, or below treeline on forest floor. Also occasionally on very wet slopes. SL: 850025 (900 m); DO: 870248 (750 m); DI: 860078 (650 m); AG: 870013 (650-700 m).

Valerianaceae

340. *Valeriana carnosa* J.E. Sm., *Pl. Icon. Ined.*, tab. 52. 1791.

Erect perennial herb; flowers white. Occasional in *Festuca gracillima* subalpine steppe. SL: 701 (800 m), 850122A (850 m).

341. *Valeriana lapathifolia* Vahl., *Enum. Pl.* 2: 11. 1805.

Erect rhizomatous perennial herb; flowers white. Common in bog and flush areas just below treeline. DI: 850923 (550 m), 850925 (600 m), 870093 (700 m).

342. *Valeriana magellanica* Hombr. et Jacq., *Voy. Pôle Sud* 2: 54. 1853.

Very stout perennial herb, forming very large, compact cushions. SL: 639 (1100 m), 841027 (1000 m), 841126 (1100 m); DO: 870263 (ca. 900 m).

343. *Valeriana philippiana* Briq., *Annuaire Conserv. Jard. Bot. Geneve* 17: 355. 1914.

Erect perennial herb; flowers white. In lower subalpine; occasional. SL: 841068 (450 m).

Verbenaceae

344. *Junellia* sp.

Prostrate shrub forming dense, hard mats; flowers pale to dark pink at age. Found only on wind-swept exposed talus slopes on Cerro Santa Lucia, where it is rare. SL: 841161 (1050 m)

345. *Junellia tridens* (Lag.) Mold., *Prelim. List Inv. Incorr. Names Verbenac.* 49. 1940.

Erect shrub; flowers white to cream. In lower subalpine zone; rare. SL: 850658 (700 m).

346. *Viola maculata* Cav., *Icon.* 6: 20, tab. 530. 1800.

Perennial herb with short rhizomes; flowers yellow. Common from the subalpine into the lower alpine, especially on sandy soils. SL: 661 (650 m), 841052 (450 m), 841133 (600 m); DI: 850876 (750 m).

347. *Viola magellanica* G. Forster, *Commentat. Soc. Regiae Sci. Gott.* 9: 41, tab. 8. 1787.

Rhizomatous perennial herb; flowers yellow. In shaded places in *Nothofagus pumilio* forest; scarce. DI: 850877 (600 m).

348. *Viola reichei* Skotts. ex Macloskie et Dusen, *Rep. Princeton Univ. Exped. Patag.* 8, *Bot., Suppl.* 176. 1914.

Rhizomatous perennial herb; flowers yellow. In shaded places in *Nothofagus pumilio* forest;

common. DI: 850807 (450 m), 860077 (700 m), 870174 (450 m).

349. *Viola tridentata* Menz. ex DC., Prodr. 1: 300. 1824.

Rhizomatous perennial herb forming large, dense mats; flowers pale purplish-blue. In alpine bogs towards the west only. DI: 850872 (900 m); AG: 870094 (650-800 m).

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TABLE I. Locality data and number of species collected in the subalpine and alpine on each of five mountains in the Sierra de los Baguales, Ultima Esperanza province, latitude 50 S, eastern Patagonia, Chile.

Mountain (elevation studied)	Lat.	Long.	Elevation	Distance from Southern Patagonian Icefield	No. spp. collected
Cerro Santa Lucia (550-1700 m)	50°46'S	72°21'W	1980 m	59 km	252
Cerro Donoso (650-1400 m)	50°44'S	72°31'W	1450 m	43.5 km	140
Cerro Diente (450-1300 m)	50°47'S	72°57'W	1338 m	13.5 km	167
Cerro Agudo (650-1200 m)	50°49'S	73°03'W	1520 m	6 km	85
Cerro Daudet (700-900 m)	50°47'S	73°04'W	1770 m	3 km	53

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